ORDER NO. VMD0001001C8

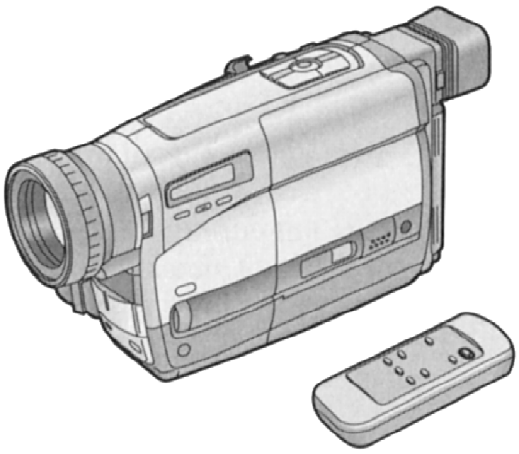
Service Manual

VHS-C Movie

Panasonic VHSC PAL HQ

NV-RZ1EG / NV-RZ1B / NV-RZ1E / NV-RZ1EN / NV-RZ1ENC / NV-RZ1A / NV-RZ2EG / NV-RZ2B / NV-RZ2EN

CZ-MECHANISM



SPECIFICATIONS

SPECIFICATIONS

ITEM	SPECIFICATION
POWER	Source: Battery Pack; 7.2 V DC AC Adaptor; 7.9 V DC Consumption (Battery Operation) ; 4.7 W
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system PAL
TAPE FORMAT	VHS-C Cassette Tape (Tape width 12.7 mm)
TAPE SPEED	SP mode : 23.3 mm/s LP mode : 11.7 mm/s (Except NV-RZ1EG/E, NV-RZ2EG) Record/Playback Time: SP mode ; 1 hour with NV-EC60 LP mode ; 2 hours with NV-EC60 (Except NV-RZ1EG/E, NV-RZ2EG) FF/REW Time: less than 2.5 min. with NV-EC45XG
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)
	STANDARD ILLUMINATION: 1,400 lx
	LENS: 20 : 1 Power Zoom Lens F1.6 Focal Length, 2.9-58 mm Digital AI Auto Focus/Auto Iris Filter Diameter ; 43 mm
	IMAGE SENSOR: 1/5-inch CCD Image Sensor

ITEM	SPECIFICATION
FINDER	0.24-inch Electronic Finder
VIDEO	HEADS: 4 Rotary heads, 1 flying erase head
	OUTPUT: PHONO CONNECTOR; 1.0 Vp-p 75 Ω terminated
AUDIO	HEADS: 1 Stationary head (Normal-Mono)
	OUTPUT: PHONO CONNECTOR; -6 dB (47kΩ loaded)/less than 1 kΩ
OPERATING TEMPERATURE	0-40 °C
OPERATING HUMIDITY	10-80 %
WEIGHT	Approx. 740g (without Battery Pack)
DIMENSIONS	81 (W) X 118 (H) X 231 (D) mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Cassette Adaptor (Except NV-RZ1B, NV-RZ2B) 1 pc. Shoulder Strap 1 pc. DC Output Cable 1 pc. Battery for Cassette Adaptor (Except NV-RZ1B, NV-RZ2B) 1 pc. AC Cord 1 pc. AV Cord 1 pc. Remote Controller 1 pc. Lithium Battery 2 pc. Battery for Remote Controller

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

1. INTRODUCTION

1.1. INTRODUCTION1

This service manual contains technical information which will allow service personnel's to understand and service this model.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

Note 1:
Adjustment procedure for Mechanism-Chassis is separate volume.
Please refer to following manual for detail of adjustment procedure for Mechanism-Chassis.
Order number for adjustment procedure of Mechanism-Chassis : VMD9912044C8

Note 2:
These movie cameras are using the different AC adaptor as follows.
VSK0541: For NV-RZ1B, NV-RZ2B.
VSK0564: For NV-RZ1EG/E/EN/ENC/A, NV-RZ2EG/EN.
The Service manuals for above AC adaptors are separately is used as follows.

Order number for AC Adaptor-----VSK0541/545 (VW-AS7) : VMD9812066C8
Order number for AC Adaptor-----VSK0564 :VMD9907028C3

1.2. INTRODUCTION2

Note 1:
NV-RZ1EN, NV-RZ2EN series has to versions depends on countries.
Detail as follows.

Model No. (Version)	NV-RZ1EN	NV-RZ1ENC	NV-RZ2EN
PACKING CASE	VPG0C68	VPG0C70	VPG0C77
AC CORD	VJA0664	VJA0664	VJA0664

1.3. FEATURE COMPARISON CHART

	RZ1EG/E	RZ1B	RZ1A	RZ1EN/ ENC	RZ2EG	RZ2B	
CCD Image Sensor	1/5”	1/5”	1/5”	1/5”	1/5”	1/5”	
CCD Capacity (Pixels)	450k	450k	450k	450k	450k	450k	
B/W EVF LCD Monitor	0.24”	0.24”	0.24”	0.24”	0.24”	0.24”	
EVF LCD Capacity (Pixels)	76,800	76,800	76,800	76,800	76,800	76,800	
Recording/Playback mode	SP	SP/LP	SP/LP	SP/LP	SP	SP/LP	
Optical Zoom Ratio	x20	x20	x20	x20	x20	x20	
Digital Zoom (x40/x100/x220)	● / ● / ●	● / ● / ●	● / ● / ●	● / ● / ●	● / ● / ●	● / ● / ●	●
Shortest Image Distance (From 1st Lens)	1.8m	1.8m	1.8m	1.8m	1.8m	1.8m	
Remote Controller	×	×	×	×	●	●	

2. SERVICE CAUTION

2.1. EEPROM DATA FOR SPARE PARTS OF THE CAMERA/MAIN C.B.A.

When the Camera/Main C.B.A. is replaced, the fixed and average data must be re-written by Tatsujin kit according to the Movie Camera’s suffix.
Then, confirm and/or adjust the VTR and Camera adjustment one by one.

2.2. SERVICE EXTENSION CABLES.

This model is required the following extension cables for all connections.
And for more convenient service, prepare the Rear Case U. (VEK8865) through a spare parts route.

Ref.	Parts No.	Pin	Part name	Connection	Q'ty	Rema
(a)	VFK1582A2120	21	Flat Cable	FP701-Lens Unit	1	
(b)	VFK1582D1225	12	Flat Cable	PP301-Lens Unit	1	
(c)	VFK1582E0720	7	Flat Cable	FP2002-Cylinder	1	
(d)	VFK1582A1325	13	Flat Cable	FP6002-CAM. OP.	1	
(e)	VFK1582A1625	16	Flat Cable	FP6004-S/S ZOOM VTR OP.	1	
(f)	VFK1582A0920	9	Flat Cable	FP4001-A/C Head	1	
(g)	VFK1582A1025	10	Flat Cable	FP1001-EVF	1	
(i)	VFK1582A1925	19	Flat Cable	FP2001-Capstan	1	
(j)	VFK1582A2125	21	Flat Cable	FP6001-Mecha. FPC.	1	
(l)	VFK1582A1620	16	Flat Cable	FP4002-Front	1	

NOTE:

New Parts numbers consist 4 blocks. And they has meaning as follows.

For example: VFK1582 A 21 20
1 2 3 4

1. It shows type of flexible cable, Zigzag, Straight or wire.

VFK1581	Straight Flexible cable without Connector
VFK1582	Straight Flexible cable with Connector
VFK1574	Zigzag Flexible cable without Connector
VFK1575	Zigzag Flexible cable with Connector
VFK1576	Wire cable

2. It shows pitch (mm) of connector.

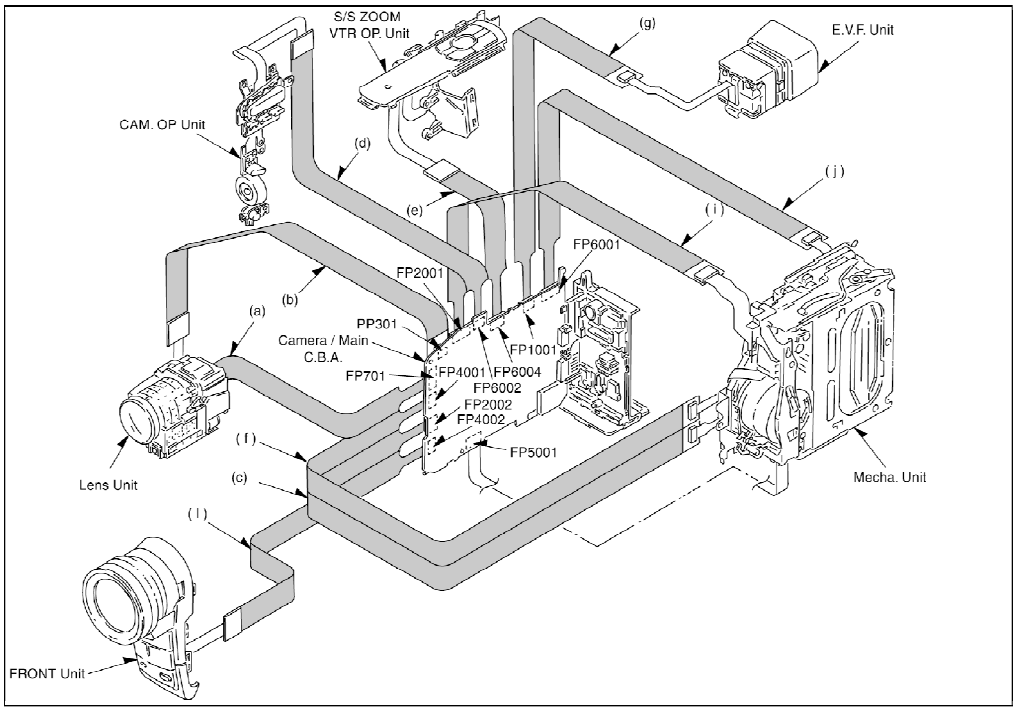
A	0.5 mm
B	0.4 mm
C	0.3mm
D	0.8mm
E	1.0mm

3. It shows number of pins of connector.

4. It shows length of cable with [cm].

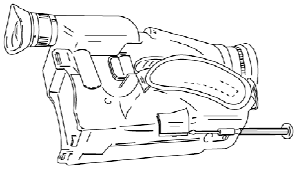
Above parts number shows;
Straight Flexible cable with connector, connector pitch is 0.5 and length of cable is 20cm.

How to use extension cables.



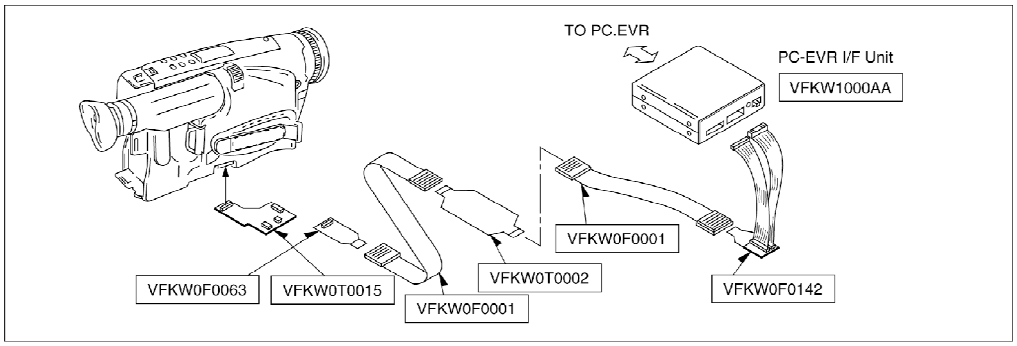
2.3. SET-UP FOR ADJUSTMENT OF TATSUJIN.

For adjustments with Tatsujin, it is not necessary to open the side case.
Just open the small cover on the side case (L) by a small screwdriver.



・Insert a small screwdriver to small hole on side case (L) and prize off the cover.
(Be carefully for prevention of scratch on case)

And insert the Extension board and connect Tatsujin cable as follows.



3. SERVICE INFORMATION

3.1. SERVICE INFORMATION DISPLAY (GENERAL DESCRIPTION)

- This Movie Camera has SERVICE INFORMATION DISPLAY function which enables quick trouble-shooting.

- The Service Information Display is available with the following prcedures.

- The Service Information is displayed on the EVF and LCD monitor. (There are 4 kinds of SERVICE MODES as shown below.) In the OSD Line Output Mode, the service Information can be also displayed on the TV.

MODE NAME	FUNCTION	How to use. (Push the following keys simultan more than 2 sec.)		
OSD Line Output MODE	-Checking the EVF information on the TV monitor.	FOCUS/SET <SIDE CASE(R)>	STOP <TOP PANEL>	DATE <SIDE T
MODE NAME	FUNCTION	How to use. (Push following keys simultaneou than 2 sec.)		
SERVICE MODE 1	-Remaining Battery A/D Value. -Safety Device. -Capstan/Cylinder injuctions.	COLOUR <SIDE CASE(R)>	STOP <TOP PANEL>	DATE <SIDE T
MODE NAME	FUNCTION	How to use. (After chosing SERVICE MODE 1, [DATE/TITLE] key.		
SERVICE MODE 2	-Reference Voltage A/D Value. -Mechanism positio.n -Serial key code.	DATE/TITLE		
MODE NAME	FUNCTION	How to use. (After chosing SERVICE MODE 2, [DATA/TITLE] key.		
SERVICE MODE 3	-ERROR CODE Display.	DATE/TITLE		
MODE NAME	FUNCTION	How to use. (After chosing SERVICE MODE 3, [DATE/TITLE] key.		
SERVICE MODE 4	-PG SHIFTER ADJUSTMENT.	DATE/TITLE		

3.2. ERROR CODE DISPLAY

- When an undesirable condition occurs, the power will be turned off. (Except zoom & focus motor lock condition. Since this model, “ERROR CODE” is not automatically displayed on the EVF and LCD monitor, also the CAMERA LED is not flashed.)
- By turning on Service Mode 3, it is possible to check what kind of undesirale condition has occurred, even after the ERROR CODE has disappeared. (The ERROR CODE is stored with EEPROM-IC.)

NOTE1:
The content of all Service Modes (Service Mode 1-Service Mode 4) is the privious models.
So, please refer to the following Technical Information for the details.
Order Number for Technical Information : VMD9512M138

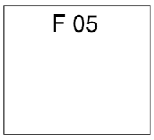
NOTE2:
Since Service Mode 3 (ERROR CODE display) is important for the service, the outline is shown

below.

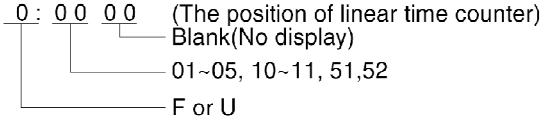
3.3. SERVICE MODE 3

- After undesirable conditions occured, you can see what kind of error occured by turning on the Service Mode 3.

Display: (Example)



Display position: (See Fig. 1)



Display	Condition	The Power off timing
F01	T-REEL LOCK	After 1 minute (flashing the LED)
F02	S-REEL LOCK	
F03	UNLOADING LOCK	
F04	LOADING LOCK	
F05	CYLINDER LOCK	
F51	FOCUS MOTOR LOCK	
F52	ZOOM MOTOR LOCK	
U10	DEW DETECTION	After 18 minutes (flashing the LED)
U20	HEAD CLOGGING	Not turning off

3.4. INSERTING THE BUTTON-TYPE BATTERY

Before setting the data and time, insert the button-type battery (supplied).

1 Open the [BACKUP BATTERY] Cover.

2 Insert the button-type battery so that its (+) side is visible.

3 Close the [BACKUP BATTERY] COVER.

- Before inserting or removing the button-type battery, be sure to set the [CAMERA/OFF/VCR] Switch to [OFF].
- When the button-type battery is exhausted, the [ ] Indication flashes. In this case, replace it with a new CR2025 battery.
  (The life of the battery is about 1 year.)
- To mark it easier to remove of the button-type battery, use a pointed object.
- When you remove the button-type battery, be careful not to drop it.

- **Keep the button-type battery out of the reach of children.**
- Make sure you insert the battery with its poles correctly aligned.
- The internal clock works even when the Movie Camera is turned off, and it consumes power from the button-type battery.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufactrer's instructions.

Note:

The lithium battery is a critical component (Type No.: CR2025 Manufactured by Panasonic.)
It must never be subjected to excessive heat or discharge.
It must therefore only be fitted in equipment designed specifically for its use.
Replacement batteries must be of the same type and manufacture.
They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.
Do not attempt to re-charge the old battery or re-use it for any other purpose.
It should be disposed of in waste products destined for burial

rather than incineration.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's instructions.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

4. GENERAL DESCRIPTIONS

5. ADJUSTMENT PROCEDURES

5.1. DISASSEMBLY PROCEDURES

Flow-Chart for Disassembly Procedure

No.	Item/Part	Fig.	Removal (Screw)
1	Side Case (L) Unit	Fig. 1	1-Screw (A) 1-Screw (B) 1-Screw (C) 3-Screws (D) 1-Screw (E)
		Fig. 2	4-Screws (F)
		Fig. 3	Locking Tab (a) Slightly open the Side Case (L) Unit. Disconnect FP6004.
2	Front Case Unit	Fig. 4	4-Locking Tabs (b) Disconnect FP4002.
3	Camera/Main C.B.A.	Fig. 5	1-Screw (G) Remove the Shild Case. Disconnect the following connectors. FP6002, FP2001, PP301, FP701, FP4001, FP2002, FP5001, FP6001, FP1001, PS3509, PS1003
4	Cassette Cover Unit	Fig. 6	1-Screw (H)
5	Rear Case Unit	Fig. 7	1-Screw (K) 2-Locking Tabs (c)
6	EVF Unit	Fig. 8	2-Screws (L)
7	Mechanism Unit	Fig. 9	3-Screws (M)
8	Lens Unit	Fig. 10	1-Screw (N)
9	Main Frame Unit	Fig. 6	1-Screw (I) 2-Screws (J)
		Fig. 11	1-Screw (O) 7-Locking Tabs (d)

Fig. 1

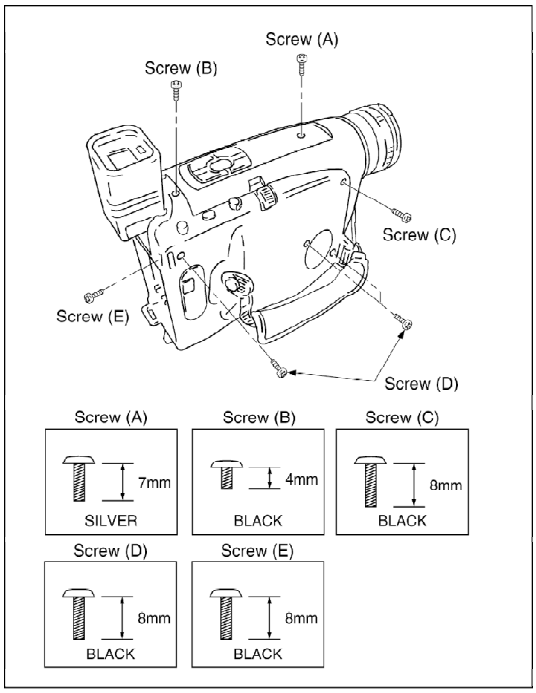


Fig. 2

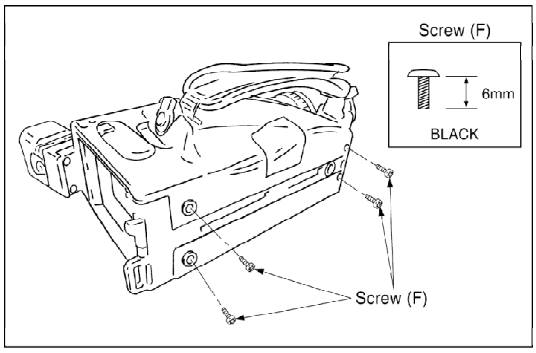


Fig. 3

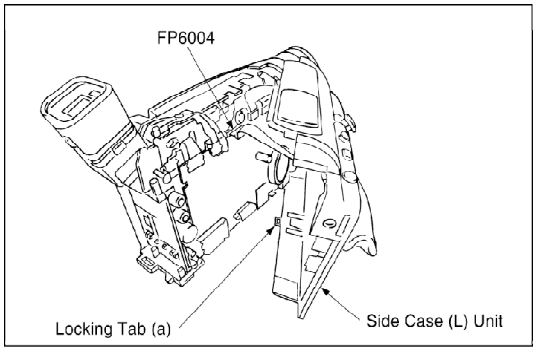


Fig. 4

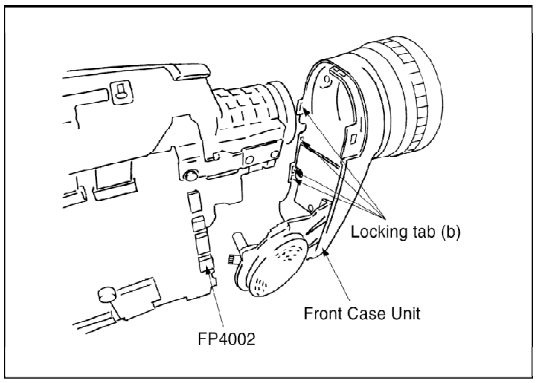


Fig. 5

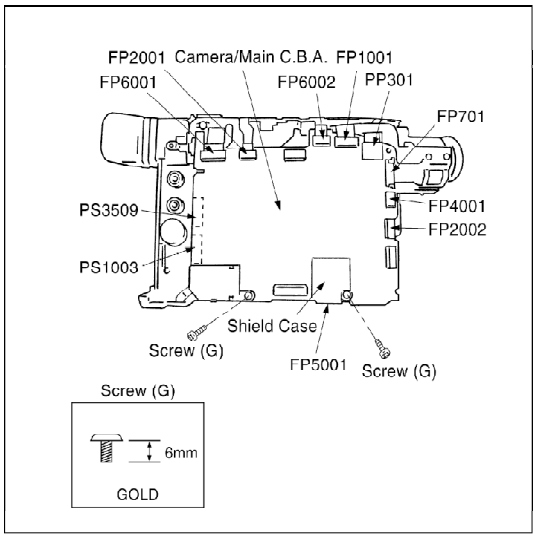


Fig. 6

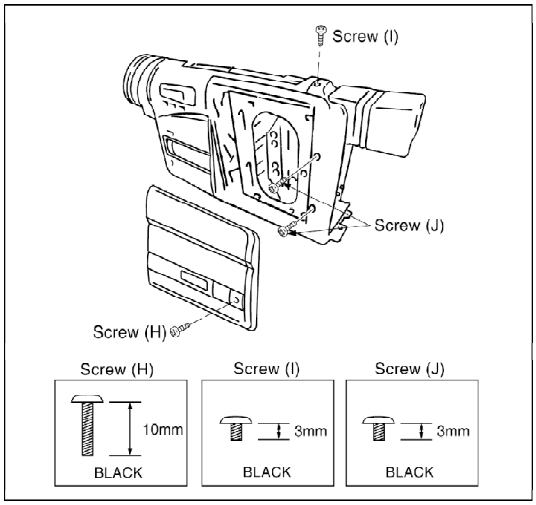


Fig. 7

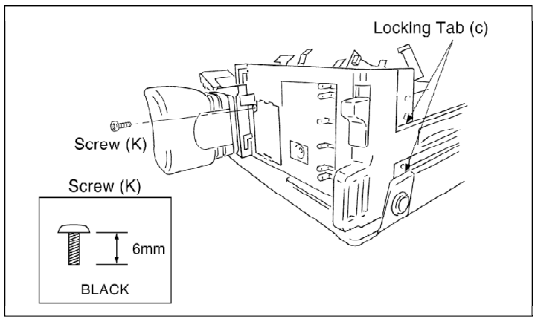


Fig. 8

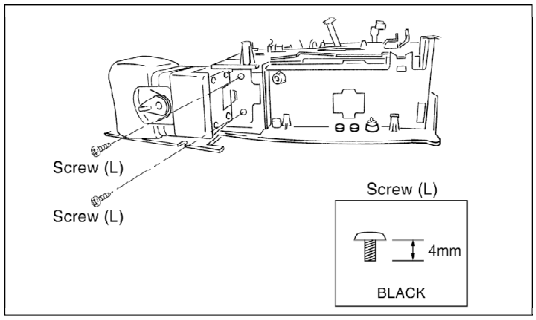


Fig. 9

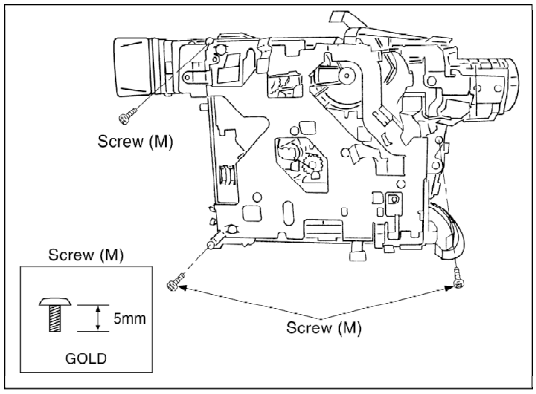


Fig. 10

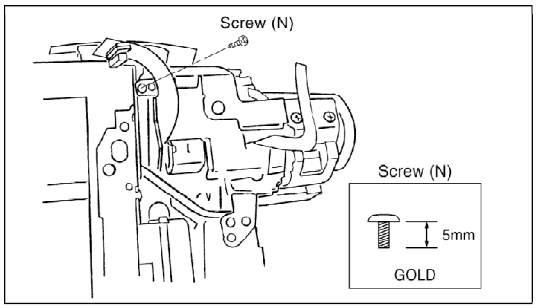
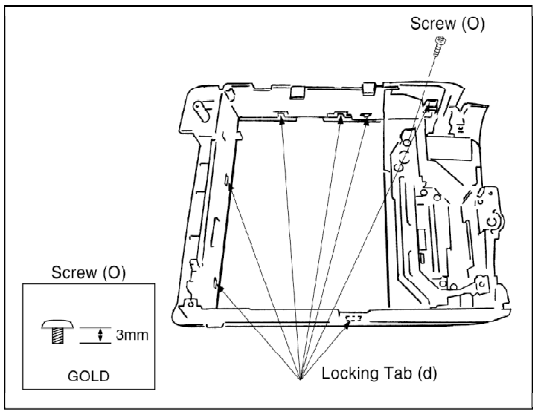


Fig. 11



5.2. DISASSEMBLY PROCEDURES OF LENS UNIT

- The following flowchart describes order or steps for removing the lens units and certain printed circuit boards in order to make access to the item needing service.

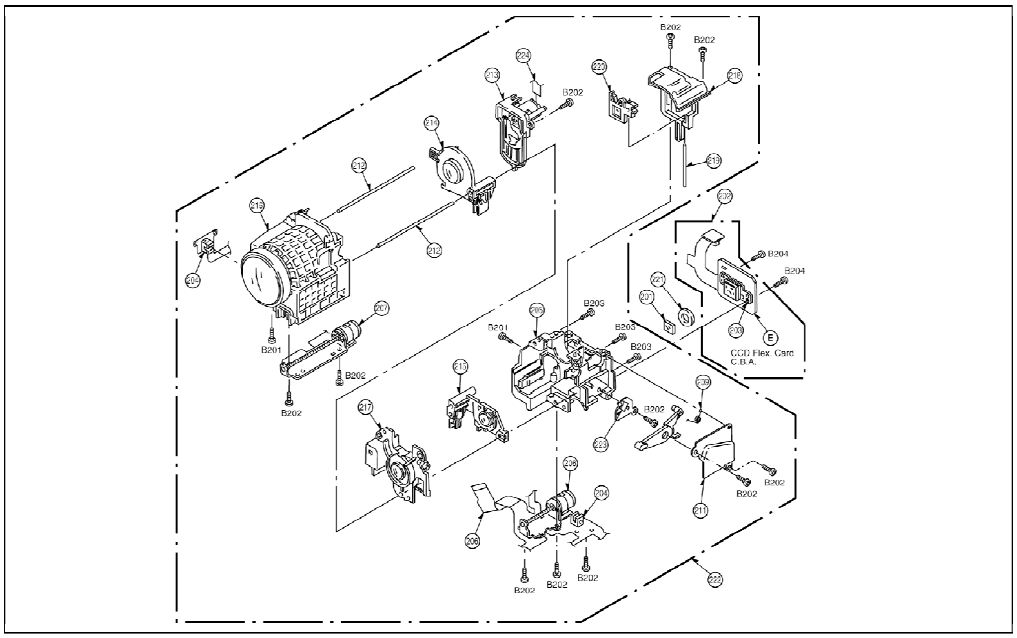
- To reassemble the unit follow the steps in reverse order.

Fig. L1

1. CCD Unit	Ref. No. 202
2. CCD Cushion & Crystal Filter	Ref. No. 221/201
3. Protect Sheet & Lever	Ref. No. 211/210
4. F fix frame & F frame U.	Ref. No. 218/220
5. Zoom Motor Unit	Ref. No. 207
6. Focus Motor Unit	Ref. No. 208
7. Lens Flex. Card C.B.A.	Ref. No. 206
8. Master Flange & Ilis U	Ref. No. 205/213
9. 3rd Lens Frame Unit	Ref. No. 217
10. 4th Moving Frame Unit	Ref. No. 215
11. 2nd Moving Frame Unit	Ref. No. 214
12. Guide Pole	Ref. No. 212

Note: Each Ref.-numbers are equivalent to number on Fig. L2 and Parts List.

Fig. L2



6. ABBREVIATIONS

7. WAVEFORM TABLE

8. BLOCK DIAGRAMS

8.1. CAMERA BLOCK DIAGRAM

8.2. SYSTEM CONTROL & SERVO/POWER BLOCK DIAGRAM

8.3. VIDEO BLOCK DIAGRAM

9. SCHEMATIC DIAGRAMS

9.1. CAMERA 1 SCHEMATIC DIAGRAM

9.2. CAMERA 2 SCHEMATIC DIAGRAM

9.3. LENS DRIVE SCHEMATIC DIAGRAM

9.4. AUDIO SHCEMATIC DIAGRAM

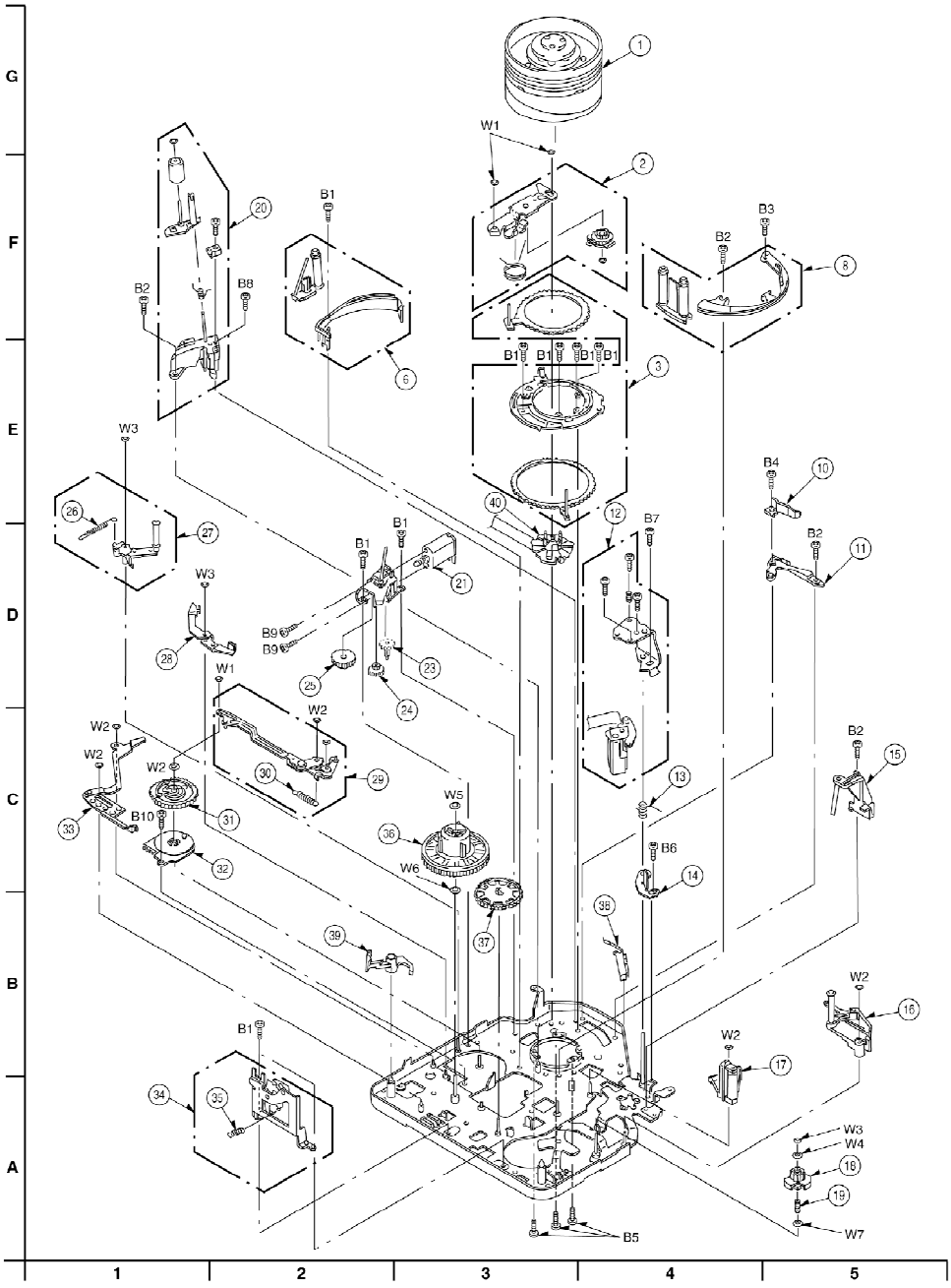
9.5. VIDEO SCHEMATIC DIAGRAM

9.6. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM

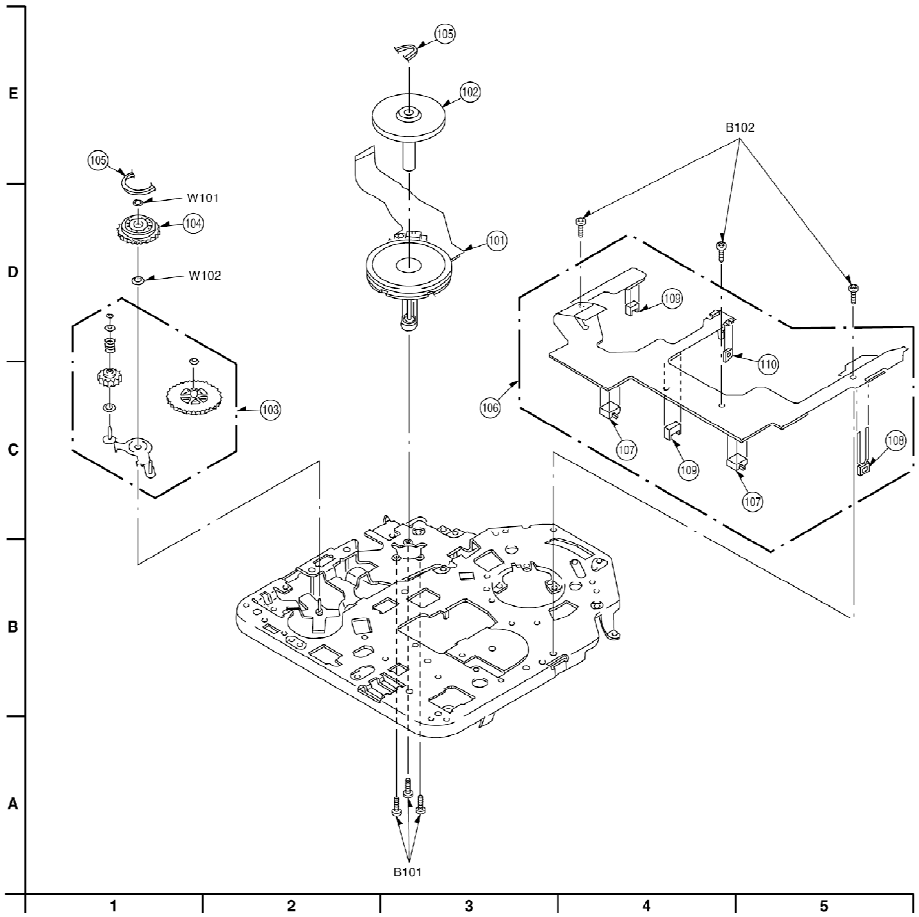
9.6.1. SYSTEM CONTROL & SERVO DC VOLTAGE CHART (SP MODE)

9.7. SUB SERVO SCHEMATIC DIAGRAM

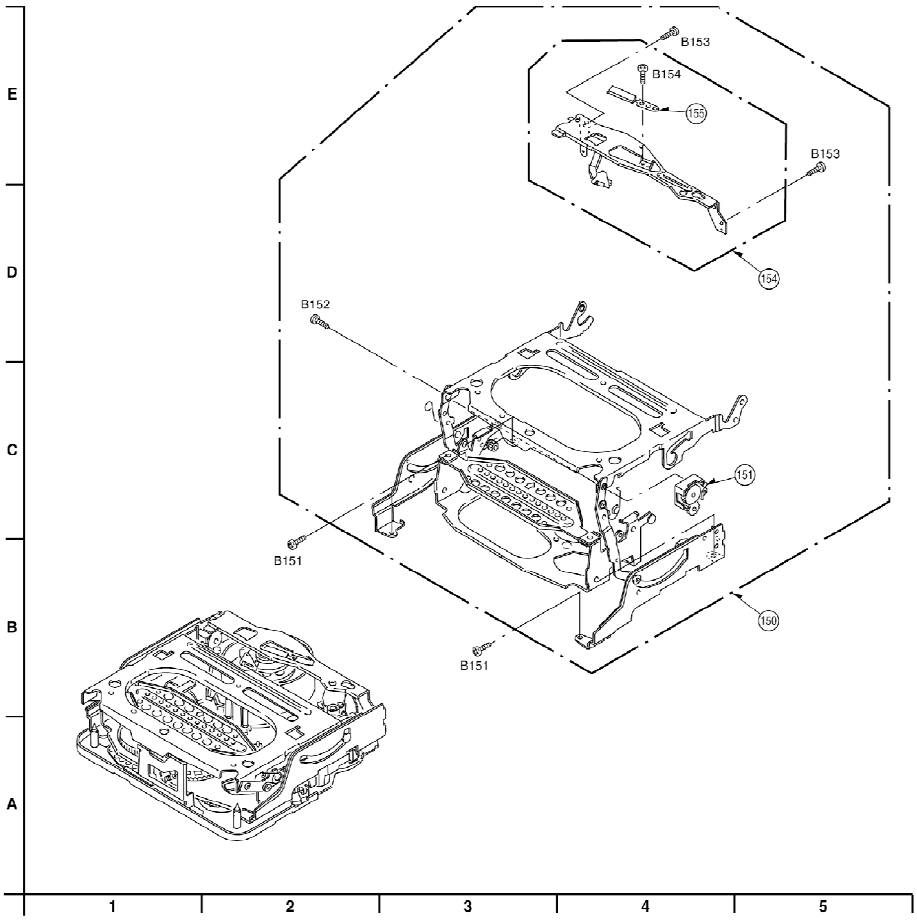
9.8. E.V.F. SCHEMATIC DIAGRAM
9.9. POWER SCHEMATIC DIAGRAM
9.10. MIC SCHEMATIC DIAGRAM
9.11. AVS OUT SCHEMATIC DIAGRAM
9.12. MIC UNIT SCHEMATIC DIAGRAM
9.13. CCD FLEX. CARD SCHEMATIC DIAGRAM
10. CIRCUIT BOARD ASSEMBLIES
10.1. CAMERA/MAIN C.B.A. ADDRESS INFORMATIONS
10.2. CAMERA/MAIN (COMPONENT SIDE) C.B.A.
10.3. CAMERA/MAIN C.B.A. (FOIL SIDE)
10.4. E.V.F. C.B.A.
10.5. CCD FLEX. CARD C.B.A.
10.6. MIC UNIT
11. EXPLODED VIEWS
11.1. VTR MECHANISM SECTION (1)



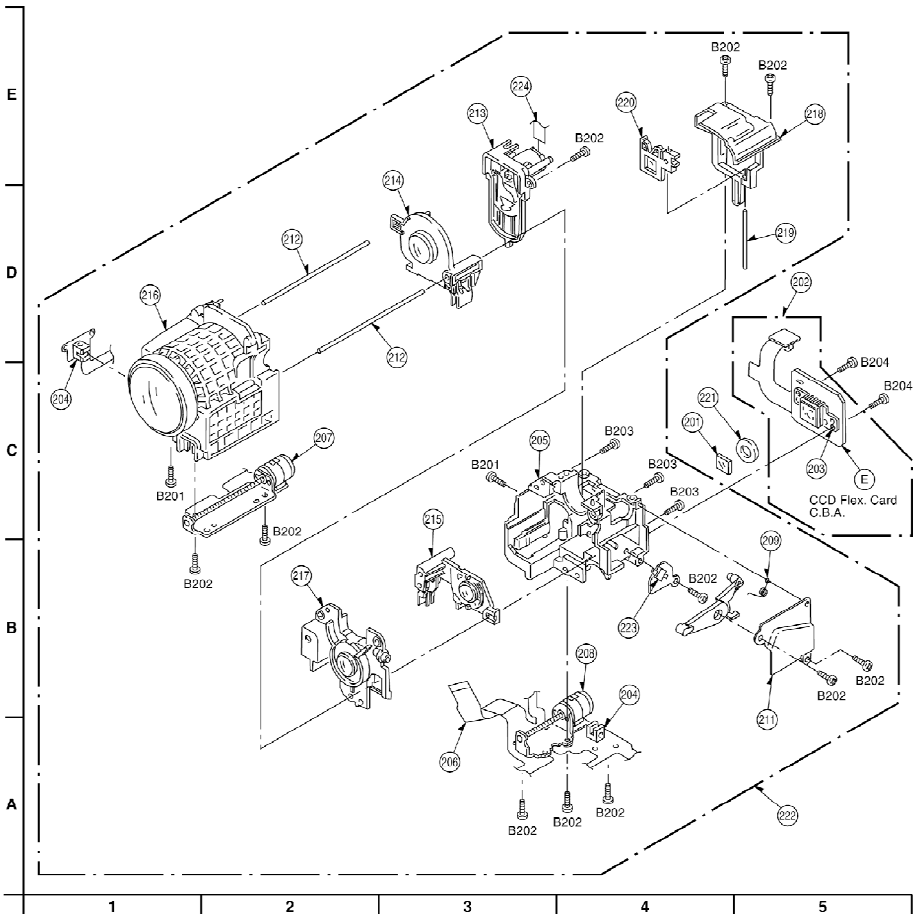
11.2. VTR MECHANISM SECTION (2)



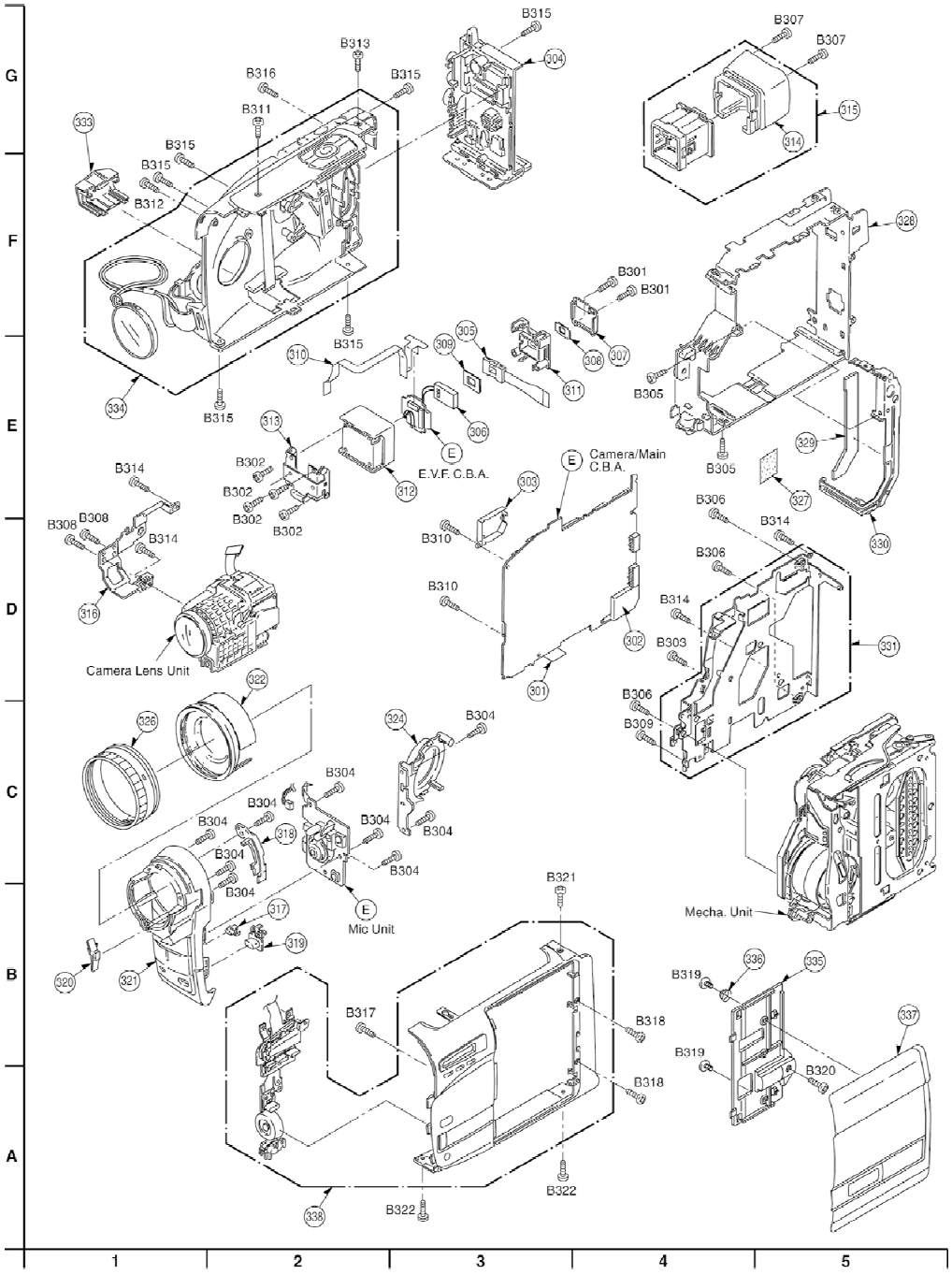
11.3. VTR MECHANISM SECTION (3)



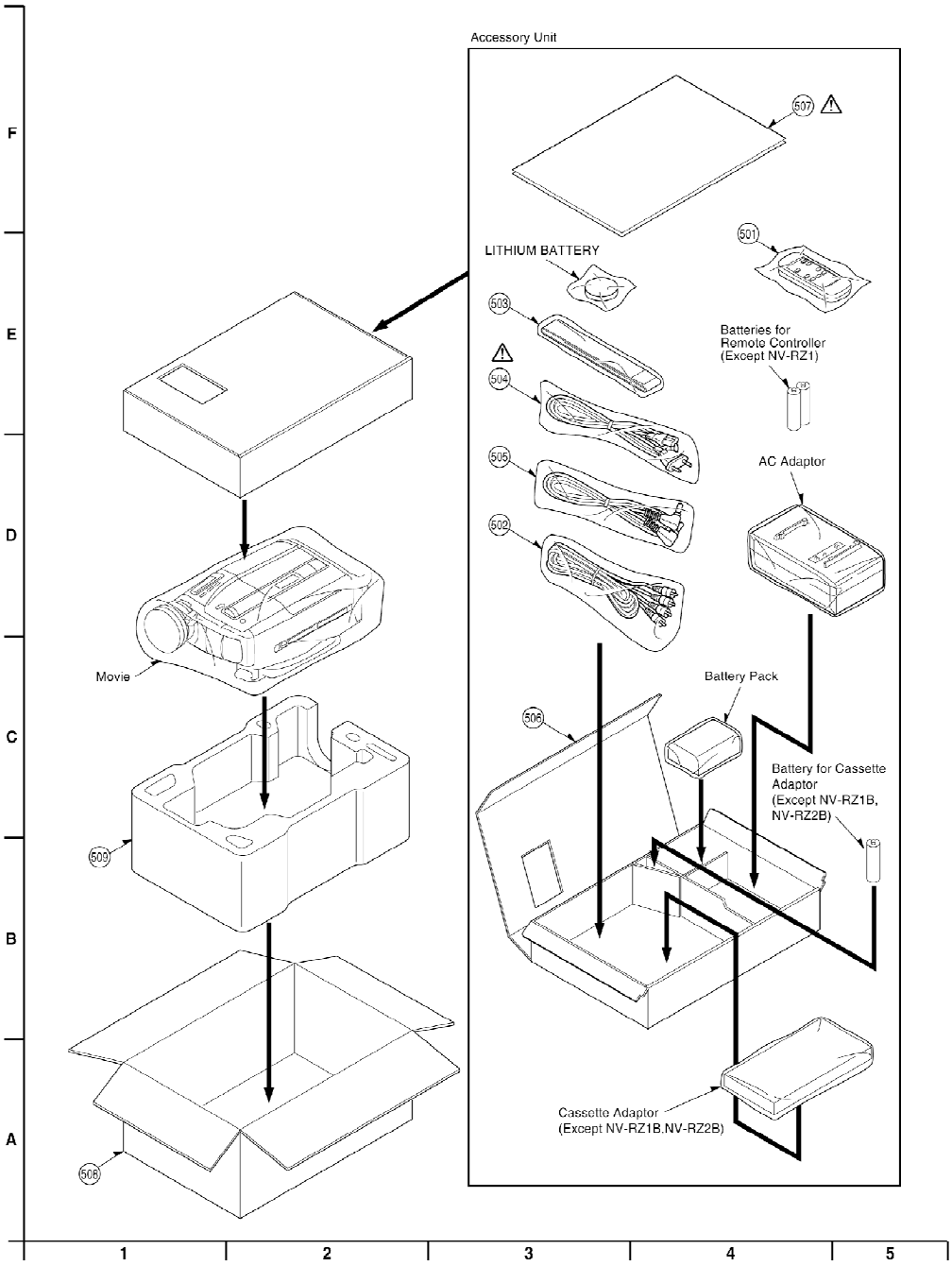
11.4. CAMERA LENS SECTION



11.5. FRAME & CASING SECTION (1)



11.6. PACKING PARTS & ACCESSORIES SECTION



12. REPLACEMENT PARTS LIST

12.1. VTR MECHANISM SECTION (1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	VEG1512	CYLINDER UNIT	1	NV-RZ1EG/E
				NV-RZ2EG
1	VEG1518	CYLINDER UNIT	1	NV-RZ1B/EN/ENC/A
				NV-RZ2B/EN
2	VXL2938	SWING ARM U.	1	
3	VXA6546	LOADING RING U	1	
6	VXA6551	S-RAIL U.	1	
8	VXA6554	T-RAIL U.	1	
10	VMD3738	T-STOPER PIN	1	
11	VMD3736	T-BOAD STOPER	1	
12	VXA6556	AC HEAD U.	1	
13	VMB3380	AC HEAD SPRING	1	
14	VMA0E11	AC ADJ. PLATE	1	
15	VXA6557	T4 POST U.	1	
16	VXL2937	T3 ARM U.	1	
17	VXL2941	PINCH ARM U.	1	
18	VDG1407	T DRIVE GEAR	1	
19	VMB3385	REW TORQUE SPRING	1	
20	VXA6549	S-BOAT STOPER U.	1	
21	VEM0708	LOADING MOTOR (1) U.	1	
22	VXA6558	MOTOR HOLDER U.	1	
23	VDG1398	BRAKE GEAR (A)	1	
24	VDG1399	BRAKE GEAR (B)	1	
25	VDG1400	BRAKE GEAR (C)	1	
26	VMB3386	TEN-REG. SPRING	1	
27	VXL2945	TEN-REG. ARM U.	1	
28	VXL2947	PAD ARM U.	1	
29	VXL2942	PINCH DRIVE ARM U.	1	
30	VMB2363	PINCH PRESSURE SPRING	1	
31	VDG1401	CAM GEAR	1	
32	VSR0245	MODE SW	1	
33	VXL2940	EJECT LEVER U.	1	
34	VXA6560	LOCK BASE U.	1	
35	VMB2369	LOCK BASE SPRING	1	
36	VDR0354	REEL BASE (S)	1	
37	VDG1410	RELAY GEAR	1	
38	VMC1568	T-BOAD SPRING	1	
39	VML3480	REC SAFETY SW U.	1	
40	VEK7277	RT CONNECTOR U.	1	
B1	XQN14+B25FY	SCREW	9	
B2	XQN14+B3	SCREW	4	
B3	XQN14+B4	SCREW	1	
B4	VHD1320	SCREW	1	
B5	XQN14+C35R	SCREW	3	
B6	VHD1338	SCREW	1	
B7	VHD1337	SCREW	1	
B8	VHD1319	SCREW	1	
B9	XQN14+A14	SCREW	2	
B10	XQN14+B25	SCREW	1	
W1	VMX2974	WASHER	3	
W2	VMX2026	WASHER	6	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
W3	VMX2027	WASHER	3	
W4	VMX3000	WASHER	1	
W5	VMX2955	WASHER	1	
W6	XWGV2D4G	WASHER	1	
W7	VMX2979	WASHER	1	

12.2. VTR MECHANISM SECTION (2) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
101	VEK8838	STATOR U.	1	
102	VXP1977	ROTOR U.	1	
103	VXL2934	IDLER ARM U.	1	
104	VXP1975	CENTER CLUTCH U.	1	
105	VDV0388	CAPSTAN BERT	1	
106	VEK8850	MECHA. FLEX. U.	1	
107	VSH0173	SWITCH	2	
108	PT4800F	PHOTO TR	1	
109	GP1S097HCZM	REEL SENSOR	2	
110	GL480	LED	1	
B101	XQN14+A3	SCREW	3	
B102	XQN14+B25FY	SCREW	3	
W101	VMX2027	WASHER	1	
W102	VMX2939	WASHER	1	

12.3. VTR MECHANISM SECTION (3) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
150	VXA6562	GARAGE U.	1	
151	VXP1472	DUMPER U.	1	
154	VXL2950	TAPE GUIDE U.	1	
155	VXS0254	EARTH BRUSH U.	1	
B151	VHD0838	SCREW	4	
B152	XQN16+AJ8	SCREW	1	
B153	XQN14+BF2	SCREW	2	
B154	VHD0711	SCREW	1	

12.4. CAMERA LENS SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
201	VDL1051	CRYSTAL FILTER	1	
202	VEK8856	CCD U.	1	
203	VMA9484	CCD FIXING PLATE	1	
204	0N1004-R	PHOTO INTERRUPTER	2	
205	VDW0670	MASTER FLANGE	1	
206	VJB20796	FLAT CARD CABLE	1	
207	VEM0712	ZOOM MOTOR U.	1	
208	VEM0713	FOCUS MOTOR U.	1	
209	VMB3392	F SPRING	1	
210	VML3486	LEVER	1	
211	VMP6163	PROTECT SHEET	1	
212	VMS6714	GUIDE POLE	2	
213	VXL2958	IRIS U.	1	
214	VXP1983	2ND. MOVING FRAME U.	1	
215	VXP1986	4TH. MOVING FRAME U.	1	
216	VXQ0884	MAIN FRAME U.	1	
217	VXQ0885	3RD. LENS FRAME U.	1	
218	VDW0672	F FIX FRAME	1	
219	VMS6494	F GUIDE POLE	1	
220	VXQ0886	F FRAME U.	1	
221	VMX2942	CCD CUSHION	1	
222	VXW0468	LENS U.	1	
223	VSP1083	DETECTION SW.	1	
224	HT-120B	HALL SENSOR	1	
B201	VHD0852	SCREW	2	
B202	XQN16+CJ5	SCREW	11	
B203	XQN16+CJ8	SCREW	3	
B204	XQN16+CJ6	SCREW	2	

12.5. FRAME & CASING SECTION (1) PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
301	VSC4600	H.A. SHIELD CASE	1	
302	VSC4959	POWER SHIELD CASE (UPPER)	1	
303	VSC4958	POWER SHIELD CASE (LOWER)	1	
304	VEK8865	REAR CASE U.	1	
305	MCVVQ410	EVF LCD PANEL	1	
306	VEK8867	BACK LIGHT U.	1	
307	VGQ5555	EVF PROTECT PANEL	1	
308	VGQ5556	EVF MASK	1	
309	VGQ5599	EVF SHEET	1	
310	VJB000F3	EVF FLEX.	1	
311	VJF1391	EVF MOUNT PIECE	1	
312	VKM5320	EVF CASE	1	
313	VXA6588	EVF HINGE U.	1	
314	VMG1272	EYE CAP	1	
315	VYQ1821	EYE CAP HOLDER U.	1	
316	VMP6167	LENS FRAME	1	
317	VGL0865	TALLY PANEL LIGHT	1	
318	VGQ5570	SELECT KNOB GUIDE	1	
319	VGU8350	FADE BUTTON	1	
320	VGU8351	SELECT KNOB	1	
321	VYK9385	FRONT CASE (1) U.	1	
322	VYQ1824	LENS COVER U.	1	
324	VGQ5583	SPEAKER PIECE	1	
326	VYQ1871	LENS HOOD U.	1	
327	VGQ5736	MECHA. SENSOR BARRIER	1	
328	VGP5167	MAIN FRAME	1	
329	VGQ5735	PROTECT SHEET	1	
330	VMP6165	FRAME REINFORCEMENT PLATE	1	
331	VYQ1820	MECHA. EARTH PLATE U.	1	
333	VKF3170	EVR COVER	1	
334	VEK8934	SIDE CASE (L) U.	1	
335	VGU8353	CASSETTE LOCK BUTTON	1	
336	VMB3300	CASSETTE COIL SPRING	1	
337	VYK9293	CASSETTE COVER (1) U.	1	NV-RZ1EG/B/E
337	VYK9451	CASSETTE COVER (1) U.	1	NV-RZ1EN/ENC/A
337	VYK9391	CASSETTE COVER (1) U.	1	NV-RZ2EG/B/EN
338	VYK9374	SIDE CASE (R)(1) UA	1	
B301	XQN16+BJ4FZ	SCREW	2	
B302	XQN2+BJ5FZ	SCREW	4	
B303	VHD1140	SCREW	1	
B304	XQN2+BJ5	SCREW	9	
B305	XQN2+BF3	SCREW	2	
B306	XQN14+C2	SCREW	3	
B307	XQN2+BF4FN	SCREW	2	
B308	XQN2+BJ5	SCREW	2	
B309	XQN2+CF4	SCREW	1	
B310	XQN2+CF5	SCREW	2	
B311	XQN2+CF8FN	SCREW	1	
B312	XQN2+CF8FZ	SCREW	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
B313	XQN2+CJ4FZ	SCREW	1	
B314	XQN2+CJ5	SCREW	4	
B315	XQN2+CJ6FZ	SCREW	6	
B316	XQN2+CJ8FZ	SCREW	1	
B317	XQN2+BF3	SCREW	1	
B318	XQN2+CJ35FZ	SCREW	2	
B319	VHD0794	SCREW	2	
B320	XQN2+CF11FZ	SCREW	1	
B321	XQN2+CJ4FZ	SCREW	1	
B322	XQN2+CJ6FZ	SCREW	2	

12.6. PACKING PARTS & ACCESSORIES SECTION PARTS LIST

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remaks
501	EUR646570	REMOTE CONTROLLER	1	NV-RZ2EG/B/EN
502	VFA0298	AV CORD	1	NV-RZ1B/EN/ENC/A
				NV-RZ2B/EN
503	VFC3299	SHOULDER STRAP	1	
504	VJA0664	AC CORD	1	NV-RZ1EG/E/EN/ENC ⚠
				NV-RZ2EG/EN
504	VJA0940	AC CORD	1	NV-RZ1B ⚠
				NV-RZ2B
504	VJA0754	AC CORD	1	NV-RZ1A ⚠
505	VJA1128	DC CORD	1	
506	VPN5108	ACCESSORIES BOX	1	NV-RZ1EG/E/EN/ENC/A
				NV-RZ2EG/EN
506	VPN5178	ACCESSORIES BOX	1	NV-RZ1B
				NV-RZ2B
507	VQT8464	OPERATING INSTRUCTIONS	1	NV-RZ1EG ⚠
		(GERMAN/FRENCH/DUTCH/		
		DANISH)		
507	VQT8465	OPERATING INSTRUCTIONS	1	NV-RZ1E ⚠
		(ITALIAN/ENGLISH/SPANISH/		NV-RZ2EG
		SWEDISH)		
507	VQT8472	OPERATING INSTRUCTIONS	1	NV-RZ1B ⚠
		(ENGLISH)		NV-RZ2B
507	VQT8466	OPERATING INSTRUCTIONS	1	NV-RZ1EN/ENC ⚠
		(CHINISE/ENGLISH/RUSSIAN/		NV-RZ2EN
		ARABIC)		
507	VQT8700	OPERATING INSTRUCTIONS	1	NV-RZ1A ⚠
		(ENGLISH)		
508	VPG0C65	PACKING CASE	1	NV-RZ1EG
508	VPG0C67	PACKING CASE	1	NV-RZ1B
508	VPG0C66	PACKING CASE	1	NV-RZ1E
508	VPG0C68	PACKING CASE	1	NV-RZ1EN/A
508	VPG0C70	PACKING CASE	1	NV-RZ1ENC
508	VPG0C75	PACKING CASE	1	NV-RZ2EG
508	VPG0C76	PACKING CASE	1	NV-RZ2B

Ref. No.	Part No.	Part Name & Description	Pcs	Remaks
508	VPG0C77	PACKING CASE	1	NV-RZ2EN
509	VPN5339	CUSHION	1	

12.7. ELECTRIC PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicates the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP23504B	MAIN C.B.A.	1	(RTL)
■	VEP28271A	EVF C.B.A.	1	(RTL)
■	VEK8873	MIC UNIT	1	NV-RZ1EG/E/B/A/EN/ENC
■	VEK8874	MIC UNIT	1	NV-RZ2EG/B/EN
■	VEP22295A	CCD FLEX. CARD C.B.A.	1	(RTL)
■	VEK8902	LENS FLEX. CARD C.B.A.	1	(RTL)
■	VEP23504B	MAIN C.B.A.	1	(RTL)
C305	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C306	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C307	VCEV1ARV101V	E.CAPACITOR CH 10V 100U	1	
C310	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C311	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C312	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C313	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C314	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C317	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C318	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C319	ECUX1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C320	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C321	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C322	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C325	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C326	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C328	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C401	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C402	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C403	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C404	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C405	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C408	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C413	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C414	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C415	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C416	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C417	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C418	ECST1AY225Z	T.CAPACITOR CH 10V 2.2U	1	
C420	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C422	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C423	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C424	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C425	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C427	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C428	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C429	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C430	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C431	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C432	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C433	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C434	ECST1AY225Z	T.CAPACITOR CH 10V 2.2U	1	
C435	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C436	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C437	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C438	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C439	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C440	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C483	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C485	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C486	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C701	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C702	ECUM1C224KBN	C.CAPACITOR CH 16V 0.22U	1	
C703	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C704	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C705	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C706	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C707	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C708	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C709	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C711	VCEV1CRV470V	E.CAPACITOR CH 16V 47U	1	
C712	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C713	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C715	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C719	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C721	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C1001	ECUM1A225KBM	C.CAPACITOR CH 10V 2.2U	1	
C1003	ECUM1A225KBM	C.CAPACITOR CH 10V 2.2U	1	
C1004	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1005	ECUM1C105KBN	C.CAPACITOR CH 10V 1U	1	
C1006	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C1008	ECUM1A225KBM	C.CAPACITOR CH 10V 2.2U	1	
C1009	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C1010	ECUM1C105KBN	C.CAPACITOR CH 10V 1U	1	
C1012	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1014	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1017	ECUM1E105KBM	C.CAPACITOR CH 25V 1U	1	
C1019	ECUM1E334KBM	C.CAPACITOR CH 25V 0.33U	1	
C1020	ECUM1E334KBM	C.CAPACITOR CH 25V 0.33U	1	
C1022	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1024	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1025	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C1026	VCEV1CRV100R	E.CAPACITOR CH 16V 10U	1	
C1027	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C1028	VCEV1HRVR47R	E.CAPACITOR CH 16V 47U	1	
C1030	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1032	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1033	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1034	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1035	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1036	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1037	ECUX1C333KBV	C.CAPACITOR CH 16V 0.033U	1	
C1041	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C1046	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C1051	ECUM1C334KBN	C.CAPACITOR CH 16V 0.33U	1	
C1055	ECUM1C105KBN	C.CAPACITOR CH 10V 1U	1	
C1057	ECUM1C105KBN	C.CAPACITOR CH 10V 1U	1	
C1063	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1064	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C1065	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C1066	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C1071	ECUM1C105KBM	C.CAPACITOR CH 16V 1U	1	
C1080	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C1081	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C1602	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C1603	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C1704	VCEV1CHY101V	E.CAPACITOR CH 16V 100U	1	
C2001	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C2002	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2003	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2004	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C2005	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2006	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2007	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2008	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2009	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2010	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2011	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2012	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2013	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2014	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2015	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2016	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2017	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C2018	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C2019	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C2020	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2021	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2022	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2023	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2024	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2032	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C2034	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2035	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2036	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2037	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3001	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3002	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3007	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3301	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3302	ECUX1H681JCV	C.CAPACITOR CH 50V 680P	1	
C3303	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3304	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3305	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3306	ECUX1H100CCV	C.CAPACITOR CH 50V 10P	1	
C3307	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3308	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3309	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3310	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3311	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3313	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3315	ECUM1C474KBN	C.CAPACITOR CH 16V 0.47U	1	
C3316	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3317	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3318	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3319	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3320	ECUM1C474KBN	C.CAPACITOR CH 16V 0.47U	1	
C3321	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3322	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3323	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3324	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3325	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3326	ECUM1A475MBM	C.CAPACITOR CH 10V 4.7U	1	
C3327	ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C3328	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3329	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3330	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3331	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3332	ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C3333	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3334	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3335	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3336	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3337	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3338	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3339	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3341	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3342	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C3343	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3344	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3345	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3346	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3347	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3348	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3349	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3350	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C3351	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3352	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3353	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3354	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3355	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3356	ECUM1C474KBN	C.CAPACITOR CH 16V 0.47U	1	
C3357	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3358	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3361	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3362	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3363	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C3370	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3380	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3505	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3511	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C3512	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C3513	VCEV0JRV220R	E.CAPACITOR CH 6.3V 22U	1	
C3517	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3552	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C3662	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C4001	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4002	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4003	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C4004	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4006	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4007	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4008	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C4009	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C4010	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4012	ECST0JX226Z	T.CAPACITOR CH 6.3V 22U	1	
C4013	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4014	ECUX1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C4015	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C4016	ECUM2A472JCM	C.CAPACITOR CH 100V 4700P	1	
C4017	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4018	ECUX1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C4019	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C4020	ECUX1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C4021	ECST1CY335Z	T.CAPACITOR CH 16V 3.3U	1	
C4022	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C4023	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4024	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C4025	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C4026	ECST1VY334Z	T.CAPACITOR CH 35V 0.33U	1	
C4027	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C4032	ECUM1C224KBN	C.CAPACITOR CH 16V 0.22U	1	
C4033	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4034	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4035	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4036	ECST0GY156Z	T.CAPACITOR CH 4V 15U	1	
C4037	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C4038	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4039	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4040	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C4041	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4101	VCEV0JHY151V	E.CAPACITOR CH 6.3V 150U	1	
C4801	ECUX1C823KBV	C.CAPACITOR CH 16V 0.082U	1	
C4803	ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C4804	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4805	ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C4806	ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C4807	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4814	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C5001	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5002	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5003	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5004	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5005	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C5006	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C5007	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C5008	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C5009	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5010	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5011	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	1	
C5012	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5013	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5014	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C5015	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5016	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C5018	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C5019	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C5020	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5021	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5022	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C5023	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C5041	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C6001	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6002	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C6004	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6005	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6006	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6007	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6009	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C6010	VCEV1ARV101V	E.CAPACITOR CH 10V 100U	1	
C6011	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C6012	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6013	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C6014	VCEV1CRV470V	E.CAPACITOR CH 16V 47U	1	
C6015	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6016	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6017	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C6018	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C6019	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C6020	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6021	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6022	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6025	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C6026	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6027	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C6028	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C6029	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C6031	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C6032	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6033	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6038	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C6039	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6040	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C6041	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C6042	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C6044	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6045	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6047	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6051	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6053	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C6054	VCEV0JHY470R	E.CAPACITOR CH 6.3V 47U	1	
C6056	ECUX1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C6057	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C6058	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
D301	MA111	DIODE	1	
D401	MA111	DIODE	1	
D1002	MA111	DIODE	1	
D1003	MA111	DIODE	1	
D1004	MA132WK	DIODE	1	
D1009	02DZ22Y	DIODE	1	
D1015	EC10QS03L12	DIODE	1	
D1020	MA111	DIODE	1	
D1602	02DZ16Y	DIODE	1	
D1604	02DZ16Y	DIODE	1	
D1701	MA111	DIODE	1	
D3303	MA111	DIODE	1	
D3305	MA111	DIODE	1	
D4001	1SS357	DIODE	1	
D6002	1SS357	DIODE	1	
D6010	MA132WA	DIODE	1	
D6016	MA133	DIODE	1	
D6020	1SS357	DIODE	1	
D6023	MA728	DIODE	1	
D6201	MA111	DIODE	1	
FL1601	VLF1378	FILTER	1	
FP701	VJS3319B021	CONNECTOR (FEMALE) 21P	1	
FP1001	VJS3931B010	CONNECTOR (FEMALE) 10P	1	
FP2001	VJS3931B019	CONNECTOR (FEMALE) 19P	1	
FP2002	VJS3913B007P	CONNECTOR (FEMALE) 7P	1	
FP4001	VJS3931B009	CONNECTOR (FEMALE) 9P	1	
FP4002	VJS3931B016	CONNECTOR (FEMALE) 16P	1	
FP5001	VJS2959B013	CONNECTOR (FEMALE) 13P	1	
FP6001	VJS3931B021	CONNECTOR (FEMALE) 21P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
FP6002	VJS3930B013	CONNECTOR (FEMALE) 13P	1	
FP6004	VJS3930B016	CONNECTOR (FEMALE) 16P	1	
IC302	C8269	IC	1	
IC315	MN31121SA	IC	1	
IC401	F712524CPBW	IC	1	
IC403	S817A33ANB	IC	1	
IC404	UPD6467GR504	IC	1	
IC405	TC7SH04FU	IC	1	
IC413	MN7E002B2S1	IC	1	
IC416	S817A30ANB	IC	1	
IC701	UPD16878GS	IC	1	
IC706	NJM2115V	IC	1	
IC711	TA75W01FU	IC	1	
IC1001	BA9706K	IC	1	
IC2001	LB11951W	IC	1	
IC3301	AN3501NFBP	IC	1	
IC3302	TL8850AF	IC	1	
IC3502	TK15407M	IC	1	
IC4001	BA7758FS	IC	1	
IC4002	BA6305FV	IC	1	
IC4003	TA75S393F	IC	1	
IC5001	AN3355FHP	IC	1	
IC6002	RS5C426M	IC	1	
IC6003	MN103004KCT	IC	1	
IC6008	AK6480AM	IC	1	
IC6009	S80825ANNP	IC	1	
IC6010	XC62FP5002PR	IC	1	
IC6011	XC62FP3002MR	IC	1	
L305	VLQ0910K100	COIL 10UH	1	
L401	VLQ0910K100	COIL 10UH	1	
L403	ELJFA390JB	CHIP INDUCTOR 39UH	1	
L407	VLQ0909J2R2	COIL 2.2UH	1	
L408	VLQ0909J220	COIL 22UH	1	
L701	VLQ0426J100	COIL 10UH	1	
L702	VLQ0426J100	COIL 10UH	1	
L703	VLQ0319K100	COIL 10UH	1	
L1001	VLQ0902M4R7	COIL 4.7UH	1	
L1002	VLQ0827M220	COIL 22UH	1	
L1003	VLQ0902M4R7	COIL 4.7UH	1	
L1004	VLQ0319K100	COIL 10UH	1	
L1006	VLQ0319K100	COIL 10UH	1	
L1007	VLQ0827M470	COIL 47UH	1	
L1008	VLQ0319M4R7	COIL 4.7UH	1	
L1010	VLQ0319K100	COIL 10UH	1	
L1011	VLQ0319K101	COIL 100UH	1	
L1014	VLQ0319K100	COIL 10UH	1	
L1015	ELJPA470KB	COIL 47UH	1	
L1061	VLQ0827M330	COIL 33UH	1	
L1062	VLQ0827M330	COIL 33UH	1	
L1801	VLQ0319K100	COIL 10UH	1	
L3001	ELJFA820JB	CHIP INDUCTOR 82UH	1	
L3005	ELJFA121JB	CHIP INDUCTOR 120UH	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L3302	ELJFA120JB	CHIP INDUCTOR 12UH	1	
L3303	VLQ0909J220	COIL 22UH	1	
L3304	VLQ0910K470	COIL 47UH	1	
L3305	VLQ0910K470	COIL 47UH	1	
L3306	VLQ0910K470	COIL 47UH	1	
L3307	VLQ0910K470	COIL 47UH	1	
L3308	ELJFA820JB	CHIP INDUCTOR 82UH	1	
L3320	VLQ0909J330	COIL 33UH	1	
L3501	VLQ0910K100	COIL 10UH	1	
L4001	ELJPA470KB	COIL 47UH	1	
L4005	VLQ0319K101	COIL 100UH	1	
L4006	VLQ0909J101	COIL 100UH	1	
L5001	VLQ0910K470	COIL 47UH	1	
L5002	VLQ0910K470	COIL 47UH	1	
L5003	VLQ0910K470	COIL 47UH	1	
L5004	VLQ0910K470	COIL 47UH	1	
LB301	VLP0153	COIL	1	
LB302	VLP0153	COIL	1	
LB303	VLP0175	COIL	1	
LB402	VLP0175	COIL	1	
LB403	VLP0175	COIL	1	
LB404	VLP0175	COIL	1	
LB412	VLP0175	COIL	1	
LB5001	VLP0319A121T	CHIP BEAD	1	
LB5002	VLP0319A121T	CHIP BEAD	1	
LB5003	VLP0319A121T	CHIP BEAD	1	
LB5004	VLP0319A121T	CHIP BEAD	1	
LB6002	VLP0153	COIL	1	
LB6003	VLP0153	COIL	1	
LB6004	VLP0153	COIL	1	
PP301	VJP3358A012	CONNECTOR (MALE) 12P	1	
PP3001	VJP3359D040	CONNECTOR (MALE) 40P	1	
PS1003	VJS4005B006	CONNECTOR (FEMALE) 6P	1	
PS3510	VJS4005B004	CONNECTOR (FEMALE) 4P	1	
Q301	2SC4627	TRANSISTOR	1	
Q303	HN1B04FUGRR	TRANSISTOR	1	
Q304	2SA1832FY	TRANSISTOR	1	
Q404	2SA1774HR	TRANSISTOR	1	
Q405	HN1A01FUYR	TRANSISTOR	1	
Q704	2SC2712GR	TRANSISTOR	1	
Q780	2SD874	TRANSISTOR	1	
Q781	2SA1832FY	TRANSISTOR	1	
Q1001	2SB1073	TRANSISTOR	1	
Q1002	2SC4738FY	TRANSISTOR	1	
Q1003	MPL1	TRANSISTOR	1	
Q1004	2SD2210	TRANSISTOR	1	
Q1006	2SA1832FY	TRANSISTOR	1	
Q1007	2SC4944YR	TRANSISTOR	1	
Q1008	2SC4738FY	TRANSISTOR	1	
Q1010	2SA1832FY	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q1061	MPL1	TRANSISTOR	1	
Q1062	MPL1	TRANSISTOR	1	
Q1702	2SC4738FY	TRANSISTOR	1	
Q2001	2SC4738FY	TRANSISTOR	1	
Q3001	2SB1219	TRANSISTOR	1	
Q3301	2SA1774HR	TRANSISTOR	1	
Q3302	2SA1832FY	TRANSISTOR	1	
Q3303	2SC4738FY	TRANSISTOR	1	
Q3320	2SA1832FY	TRANSISTOR	1	
Q4002	2SD602-R	TRANSISTOR	1	
Q4003	2SB1219	TRANSISTOR	1	
Q4005	XP4501	TRANSISTOR-TRANSISTOR	1	
Q4006	2SC4617HR	TRANSISTOR	1	
Q4009	2SC4617HR	TRANSISTOR	1	
Q4801	2SC4617HR	TRANSISTOR	1	
Q4802	2SC4617HR	TRANSISTOR	1	
Q4803	2SC4617HR	TRANSISTOR	1	
Q5001	HN1C03FBR	TRANSISTOR	1	
Q5002	HN1C03FBR	TRANSISTOR	1	
Q5003	2SA812	TRANSISTOR	1	
Q6001	2SC3295A	TRANSISTOR	1	
Q6002	2SA1832FY	TRANSISTOR	1	
Q6003	2SC4738FY	TRANSISTOR	1	
Q6004	2SC4738FY	TRANSISTOR	1	
Q6006	2SC4944YR	TRANSISTOR	1	
QR401	RN2103F	TRANSISTOR-RESISTOR	1	
QR402	RN2107F	TRANSISTOR-RESISTOR	1	
QR404	RN1704R	TRANSISTOR-RESISTOR	1	
QR405	RN1104F	TRANSISTOR-RESISTOR	1	
QR701	RN1102F	TRANSISTOR-RESISTOR	1	
QR781	UN2130X	TRANSISTOR-RESISTOR	1	
QR782	RN1103F	TRANSISTOR-RESISTOR	1	
QR1001	RN2102F	TRANSISTOR-RESISTOR	1	
QR1002	UN2130X	TRANSISTOR-RESISTOR	1	
QR1003	RN2103F	TRANSISTOR-RESISTOR	1	
QR1005	RN1112F	TRANSISTOR-RESISTOR	1	
QR1061	RN2111F	TRANSISTOR-RESISTOR	1	
QR1701	RN2111F	TRANSISTOR-RESISTOR	1	
QR2001	RN1111F	TRANSISTOR-RESISTOR	1	
QR3002	RN1103F	TRANSISTOR-RESISTOR	1	
QR3301	RN2103F	TRANSISTOR-RESISTOR	1	
QR3305	RN1104F	TRANSISTOR-RESISTOR	1	
QR3306	RN2103F	TRANSISTOR-RESISTOR	1	
QR3307	RN1104F	TRANSISTOR-RESISTOR	1	
QR3308	RN2103F	TRANSISTOR-RESISTOR	1	
QR3309	RN1104F	TRANSISTOR-RESISTOR	1	
QR3310	RN1104F	TRANSISTOR-RESISTOR	1	
QR3311	RN2103F	TRANSISTOR-RESISTOR	1	
QR4001	RN1103F	TRANSISTOR-RESISTOR	1	
QR4002	RN2103F	TRANSISTOR-RESISTOR	1	
QR4004	RN2103F	TRANSISTOR-RESISTOR	1	
QR6001	RN1111F	TRANSISTOR-RESISTOR	1	
QR6002	UN911EJ	TRANSISTOR-RESISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR6003	RN1711R	TRANSISTOR-RESISTOR	1	
QR6004	RN1711R	TRANSISTOR-RESISTOR	1	
QR6005	RN2103F	TRANSISTOR-RESISTOR	1	
QR6007	RN1102F	TRANSISTOR-RESISTOR	1	
QR6009	RN1113F	TRANSISTOR-RESISTOR	1	
QR6013	RN2111F	TRANSISTOR-RESISTOR	1	
QR6014	RN1111F	TRANSISTOR-RESISTOR	1	
QR6050	RN1704R	TRANSISTOR-RESISTOR	1	
QR6801	RN2111F	TRANSISTOR-RESISTOR	1	
R201	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R219	ERJ3GEYJ335	M.RESISTOR CH 1/16W 3.3M	1	
R301	ERJ3RBD622	M.RESISTOR CH 1/16W 6.2K	1	
R302	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R303	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R304	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R305	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R306	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R307	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R308	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R309	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R312	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R313	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R315	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R316	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R317	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R318	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R403	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R404	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R406	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R408	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R409	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R412	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R413	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R414	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R415	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R416	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R417	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R418	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R419	ERJ3RBD911	M.RESISTOR CH 1/16W 910	1	
R420	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R421	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R422	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R423	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R424	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R425	ERJ3RBD683	M.RESISTOR CH 1/16W 68K	1	
R426	ERJ3RBD223	M.RESISTOR CH 1/16W 22K	1	
R427	ERJ3RBD621	M.RESISTOR CH 1/16W 620	1	
R428	ERJ3RBD392	M.RESISTOR CH 1/16W 3.9K	1	
R430	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R431	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R433	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R434	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R436	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R437	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R438	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R440	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R444	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R445	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R446	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R447	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R450	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R451	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R458	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R459	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R470	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R476	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R477	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R479	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R480	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R481	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R482	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R701	ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R702	ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R703	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R704	ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R705	ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R706	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R707	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R709	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R712	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R713	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R714	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R716	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R717	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R718	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R722	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R723	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R726	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R727	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R728	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R729	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R730	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R731	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R732	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R733	ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R734	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R735	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R736	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R737	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R738	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R740	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R743	ERJ3RBD752	M.RESISTOR CH 1/16W 7.5K	1	
R745	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R761	ERJ3RBD222	M.RESISTOR CH 1/16W 2.2K	1	
R780	ERJ6GEYJ150	M.RESISTOR CH 1/10W 15	1	
R781	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R782	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R783	ERJ6GEYJ150	M.RESISTOR CH 1/10W 15	1	
R784	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R785	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R1001	ERJ3RBD822	M.RESISTOR CH 1/16W 8.2K	1	
R1002	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R1004	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1005	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R1006	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R1007	ERJ8GEYJ330	M.RESISTOR CH 1/8W 33	1	
R1008	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R1009	ERJ3RBD152	M.RESISTOR CH 1/16W 1.5K	1	
R1010	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1012	ERJ6RHD1872	M.RESISTOR CH 1/10W 18.7K	1	
R1013	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	1	
R1014	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	1	
R1015	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	1	
R1016	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R1017	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1018	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1019	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R1020	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1021	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R1022	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R1023	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R1024	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1025	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1028	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1029	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R1030	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R1035	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1038	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R1039	ERJ3RBD561	M.RESISTOR CH 1/16W 560	1	
R1040	ERJ3RBD111	M.RESISTOR CH 1/16W 110	1	
R1041	ERJ6RBD683	M.RESISTOR CH 1/10W 68K	1	
R1042	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R1043	ERJ3RBD472	M.RESISTOR CH 1/16W 4.7K	1	
R1044	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R1052	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R1053	ERJ3RBD101	M.RESISTOR CH 1/16W 100	1	
R1057	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R1063	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1064	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R1065	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R1066	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R1067	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R1068	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R1069	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R1071	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1072	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R1073	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R1085	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1086	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1601	VSF0226D25T	FUSE	1	⚠
R1602	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1603	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R1606	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R1607	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R1699	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1704	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R1705	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R1706	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R1707	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R1709	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R1710	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1822	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1835	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2001	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R2002	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R2003	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2004	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R2005	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R2006	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R2007	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R2008	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R2009	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R2010	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R2011	ERJ8GEYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2012	ERJ8RQJR22	M.RESISTOR CH 1/8W 0.22	1	
R2013	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2014	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R2015	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R2016	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R2017	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R2018	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R2019	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R2020	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R2021	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R2022	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3001	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3002	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3003	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3004	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3005	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R3017	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3040	ERJ3RBD362	M.RESISTOR CH 1/16W 3.6K	1	
R3041	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R3042	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3301	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3302	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3303	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3306	ERJ3RBD301	M.RESISTOR CH 1/16W 300	1	
R3307	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3308	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R3309	ERJ3GEYJ125	M.RESISTOR CH 1/16W 1.2M	1	
R3310	ERJ3RBD301	M.RESISTOR CH 1/16W 300	1	
R3311	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3312	ERJ3RBD332	M.RESISTOR CH 1/16W 3.3K	1	
R3314	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3316	ERJ3RBD102	M.RESISTOR CH 1/16W 1K	1	
R3317	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3318	ERJ3RBD221	M.RESISTOR CH 1/16W 220	1	
R3319	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3320	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3322	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3323	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R3325	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3326	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3327	ERJ3RBD241	M.RESISTOR CH 1/16W 240	1	
R3328	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3331	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3332	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3333	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3334	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3342	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3344	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3345	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3346	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3350	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3351	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3352	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3504	ERJ3RED620	M.RESISTOR CH 1/16W 62	1	
R3508	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R3509	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R3510	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R3551	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4001	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R4002	ERJ3GEYJ155	M.RESISTOR CH 1/16W 1.5M	1	
R4003	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4004	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R4005	ERJ3GEYJ2R2	M.RESISTOR CH 1/16W 2.2	1	
R4006	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R4007	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4008	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R4009	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4010	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R4011	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4012	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4013	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R4014	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R4015	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4016	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4017	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4018	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4019	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4020	ERJ3RBD431	M.RESISTOR CH 1/16W 430	1	
R4021	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R4022	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4023	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R4024	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4025	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4026	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R4030	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4031	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R4032	ERJ3RBD272	M.RESISTOR CH 1/16W 2.7K	1	
R4033	ERJ3RBD152	M.RESISTOR CH 1/16W 1.5K	1	
R4034	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4035	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4036	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4037	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4038	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R4039	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4040	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4041	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4042	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4043	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4044	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R4110	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R4801	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4802	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R4803	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4804	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R4805	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R4806	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R4807	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4808	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R4809	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R4810	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R4811	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4812	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4817	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5001	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R5002	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R5003	ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R5004	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R5005	ERJ3GEYG113	M.RESISTOR CH 1/16W 11K	1	
R5006	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R5007	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R5008	ERJ6GEYJ4R7	M.RESISTOR CH 1/10W 4.7	1	
R6001	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6002	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6003	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6004	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6005	ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R6006	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6007	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6008	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6009	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R6010	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R6011	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6012	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6013	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6014	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6017	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R6018	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6019	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6020	ERJ3GEYG333	M.RESISTOR CH 1/16W 33K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6021	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6022	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6023	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6024	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6025	ERJ3GEYJ335	M.RESISTOR CH 1/16W 3.3M	1	
R6026	ERJ3GEYG223	M.RESISTOR CH 1/16W 22K	1	
R6027	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6028	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6029	ERJ3GEYJ304	M.RESISTOR CH 1/16W 30K	1	
R6030	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6031	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6032	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6033	ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R6034	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6035	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6036	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6037	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6038	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6039	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6040	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6041	ERJ8GEYJ120	M.RESISTOR CH 1/8W 12	1	
R6042	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6043	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6044	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6046	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6048	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6051	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6052	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6053	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6054	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6055	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6056	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6057	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6058	ERJ3RBD183	M.RESISTOR CH 1/16W 18K	1	
R6059	ERJ3RBD433	M.RESISTOR CH 1/16W 47K	1	
R6060	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6061	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6062	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6063	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6064	ERJ3RBD363	M.RESISTOR CH 1/16W 36K	1	
R6065	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6066	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6067	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6068	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6069	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6070	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R6071	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6072	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6075	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6078	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6079	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6080	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R6081	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6082	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6083	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6085	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6086	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6088	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6089	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6092	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6093	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R6094	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6095	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6097	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6100	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6101	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6103	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6104	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6105	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6106	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R6107	ERJ3RBD823	M.RESISTOR CH 1/16W 82K	1	
R6108	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6109	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6110	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R6111	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R6112	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6113	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6114	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6116	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6117	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6118	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6119	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6120	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6121	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6122	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R6123	ERJ3RBD153	M.RESISTOR CH 1/16W 15K	1	
R6131	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6132	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6133	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6211	ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6801	ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
R6802	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
RA301	EXBV4V104J	RESISTOR-RESISTOR	1	
RA704	EXBV4V473J	RESISTOR-RESISTOR	1	
RA6001	EXBV4V102J	RESISTOR-RESISTOR	1	
RA6002	EXBV4V272J	RESISTOR-RESISTOR	1	
RA6008	EXBV4V683J	RESISTOR-RESISTOR	1	
RA6010	EXBV8V102J	RESISTOR-RESISTOR	1	
T1001	VTP0535	TRANSFORMER	1	
T4001	VLQ0905	OSCILLATOR COIL	1	
X402	VSX1100	CRYSTAL OSCILLATOR	1	
X6001	VSX0917	CRYSTAL OSCILLATOR	1	
X6002	VSX0601	CRYSTAL OSCILLATOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP28271A	EVF C.B.A.	1	(RTL)
C801	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C802	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C803	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C804	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C805	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C806	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C807	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C808	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C809	ECST1EX335Z	T.CAPACITOR CH 25V 3.3U	1	
C812	ECST0JY106Z	T.CAPACITOR CH 6.3V 10U	1	
C813	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C814	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C815	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C816	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C817	ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C818	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C819	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
FP802	VJS4365B020	CONNECTOR (FEMALE) 20P	1	
FP803	VJS4297B010	CONNECTOR (FEMALE) 10P	1	
IC801	MCVVQ110CFB	IC	1	
IC802	TC7W74FU	IC	1	
L800	VLQ0910K470	COIL 47UH	1	
R802	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R803	ERJ3RBD103	M.RESISTOR CH 1/16W 10K	1	
R804	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R805	ERJ3GEYJ112	M.RESISTOR CH 1/16W 1.1K	1	
R807	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R809	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R810	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R812	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
■	VEK8873	MIC UNIT	1	NV-RZ1EG/E/B/A/EN/ENC
D6801	BR2202S-20B1	DIODE	1	
D6802	PH310	DIODE	1	
D6803	SLR738AV50AC	LED	1	
D6804	SLR738AV50AC	LED	1	
SW6801	EVQ6QF02K	SWITCH	1	
■	VEK8874	MIC UNIT	1	NV-RZ2EG/B/EN

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6801	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
D6801	BR2202S-20B1	DIODE	1	
D6802	PH310	DIODE	1	
D6803	SLR738AV50AC	LED	1	
D6804	SLR738AV50AC	LED	1	
IC6801	PNA4611M05VT	IR RECEIVER	1	
L6801	VLQEL05S101K	COIL 100UH	1	
SW6801	EVQ6QF02K	SWITCH	1	
■	VEP22295A	CCD FLEX. CARD C.B.A.	1	(RTL)
C292	ECST1VX225Z	T.CAPACITOR CH 35V 2.2U	1	
C295	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
D291	MA153	DIODE	1	
PS291	VJS3500C012	CONNECTOR (FEMALE) 12P	1	
Q291	2SC2295	TRANSISTOR	1	
R291	ERJ6GEYJ560	M.RESISTOR CH 1/10W 56	1	
R292	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R293	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
		MISCELLANEOUS		
	VJB22295	FLEX. CARD	1	
■	VEK8902	LENS FLEX. CARD C.B.A.	1	(RTL)
		MISCELLANEOUS		
	HT-120B	HALL SENSOR	1	
	VSP1083	0LUX SWITCH	1	

TO LENS DRIVE/
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1	REG 4.8V
2	REG 3V
3	V REF (L)
4	PWM(A)
5	V REF (H)
6	CAM GND

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7	REG 3V
8	REG 4.8V
9	NOREG
10	CAM GND

TO SYSTEM/
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55	AD0	AD0
56	AD1	AD1
57	AD2	AD2
58	AD3	AD3
59	AD4	AD4
60	AD5	AD5
61	AD6	AD6
62	AD7	AD7
63	AD8	AD8
64	ALE	ALE
72	R W	R W
52	WE	WE
53	RE	RE
1	BEND	BEND
2	V1V2	V1V2
65	CG CS	
3	ENC RST	
68	REF25	
67	OK (H)	
74	E2 SBT	
73	E2 SBO	
77	DM CS	
66	DM PROF	
75	P DOWN	U1
51	DSP RST	
54	OSD V	U2
69	SYS VD	
4	ART V	
5	SCR (H)	
49	CAM TEST	
71	V CLK	
76	OSD CS	
70	V DATA	
50	OSD RST	

TO POWER/
Page:38

19	OSD IN

LB412 VLP0175

LB411 VLP0175

C429 4700P

IC416
S817A30ANBT2
(REG 3V)

C486 0.01

IC403
S817A33ANBT2
(REG 3.3V)

IC413
MN7E002B2S1
(DIGITAL MEMORY)

VDD GND VD HD DMY DMCHR VDD GND FCK C RST RST FI GND VDD OKH SCLK SDTI CS PREP

C483 0.01

R413 1K

C485 6.3V47

C428 0.1

R438 100

R446 1K

C427 0.01

R450 4700

R451 3900

C435 1

R406 3300

IC404
UPD6467
(OSD)

GND TEST EXD XD CMDCT VDD TCL DATA CS CLK

LD RDBLK RD NRD BLK NRD1 OSD VD HD

R444 10K

R445 10K

QR402
RN2107FTPH3
(SCR (H) :ON)

R437 10K

QR401
RN2103FTPH3
(SCR:ON)

D401 MA111

C417 1500P

QR404
RN1704R
(VD BUFFER)

R436 1500

(U5)

(U4)

:VIDEO MAIN SIGNAL PATH

IC401
F712524CPBW
(DSP)

IC405
TC7SH04FU

Q404
2SA1774HRT4L
(MIX)

Q405
HN1A01FUYR
(AMP)

QR405
RN1104FTPH3
(SWITCHING)

TO CAMERA1/ Page:27

REG 3V	9
V REF (L)	22
PWM(B)	16
V REF (H)	21
AD Y IN	8
E2 SBT	15
E2 SBO	14
SUB	1
CH2	2
CH1	3
V4	4
V3	5
V2	6
V1	7
P BLK	13
H2	25
H1	24
R PULSE	26
DS2	10
DS1	11
CG 3.3V	23
V REF Y	17
TVOL CLV	31
FCK	12

TO VIDEO/ Page:32

V REF (L)	10
V REF (H)	9
4.43MHz	14
SYS VD	8
VTR SYNC	15

TO VIDEO/ Page:32

VTR 4.8V	11
CAM Y/C IN	12
L DATA	13

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

12 13 14 15 16 17 18 19 20 21 22

:VIDEO MAIN SIGNAL PATH

CCD UNIT

IC315 (CCD DRIVE)

SUB, V4, CH2, V3, V2, CH1, V1

PS291/PP301 3/3, 8/8, 9/9, 10/10, 11/11, 12/12 → FROM POWER SECTION

V4, V3, V2, V1, -8V

+15V → PS291/PP301 2/2 → FROM POWER SECTION

CCD IMAGE SENSOR

Q291 BUFFER

PS291/PP301 1/1

H1, H2

PS291/PP301 5/5 H2, 4/4 H1, 6/6 R

TO VIDEO

IC302(CDS/AGC/AD)

CDS, AGC, KNEE, BUFF

D/A, V REF GEN.

SPK VOL, TVOL CLV, WVOL CRE, Y CTL, VREFY

DS2, DS1, VBOT, VTOP, SDATA, SCK, CSN, PWMB, HALL GAIN, HALL BIAS

IC401(DSP)

AIN, VRT, VRB

A/D CONVERTER → 8bit AD OUT → Y/C D.S.P → DSP Y, DSP C, AF Y

ZOOM, ZOOM.Y, ZOOM.C

SYNC,BA CBLK,ID FP

ENC, ENC.Y, ENC.C → DAC → Q405 AMP, Q404 MIX → TO VIDEO

DS1, DS2, H2, H1, R, SUB, V4, CH2, V3, V2, CH1, V1

(CG) CLOCK GEN.(2)

VD, DCP, FH2, HD, HCLR

DATA

DB-DIS, DIS, SSG, FGP, FTG, AF

4FCK, FCK, 2FCK

X401 OSC

CG1: FCK, FCKU, 2FCK, 2FCKU, ADCLK

VREFC, VREFY

DSP MICON INTERFACE

DM CHR

PWM, E2SBT, E2SBO, POWER DOWN, RE, WE, BEND, V1V2, CGCS, R/W, 2/3 FCK, CHARA.IN, FROM CG (VD, HD), DMY, SIDEI, FCKO

IC413 (DIGITAL MEMORY)

FCK, DMY, SDTI, SCLK, VD, HD, PREP, DMCHR, CS, C RST, OKH

IC404 (OSD)

EXD, RD, VD, HD, RDBLK

CLK, CS, DATA, NRD1, BLK, NRD

NRD BLK → TO EVF

LENS UNIT

FP701 8, FP701 2 → ALC MAIN → Q704 AMP → IC706

FROM EVR → IC711

HALL OUT(+), HALL OUT(-), HALL IN(+), HALL IN(-)

FOCUS ENCODER

LED CTL → QR701 LED DRIVE

ZOOM ENCODER

ZOOM ENCODER, FOCUS ENCODER

ZOOM LENS, IRIS, FOCUS LENS

ZOOM MOTOR, HALL SENSOR, IRIS MOTOR, FOCUS MOTOR

IC701(MOTOR DRIVE)

FMT1, FMT2, FMT3, FMT4 → A1, B2, A2, B1

ZMT1, ZMT2, ZMT3, ZMT4 → C1, D2, C2, D1

RESET, OSCIN, SCLK, SDATA, LATCH, VD, EXTZ, EXTF

IC6008(EEPROM)

CS, CK, SI, SO, R/B

E2PCS, E2SBT, E2SBO, E2SBI, E2R/B

CSN, PDN, RE, WE, BEND, AD0-AD8, V1V2, CGCS, R/W, VTRSBT, OSDCS, VTRSBO

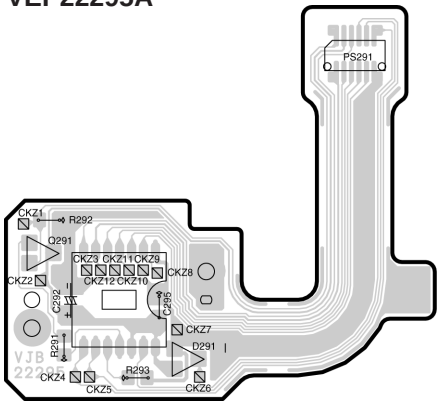
FENC, LED CNT, ZENC, 0LUX CNT, AF DRRST, F-CLK, AF DRSBT, AF DRSBI, AF DRCS, AF DRVD, AF DREXZ, AF DREXF

DMPPOF, OKH, DSPRST, DMCS

IC6003 (SYSTEM CONTROL & SERVO MICOROPROCESSOR)

SYSTEM CONTROL SECTION

VEP22295A

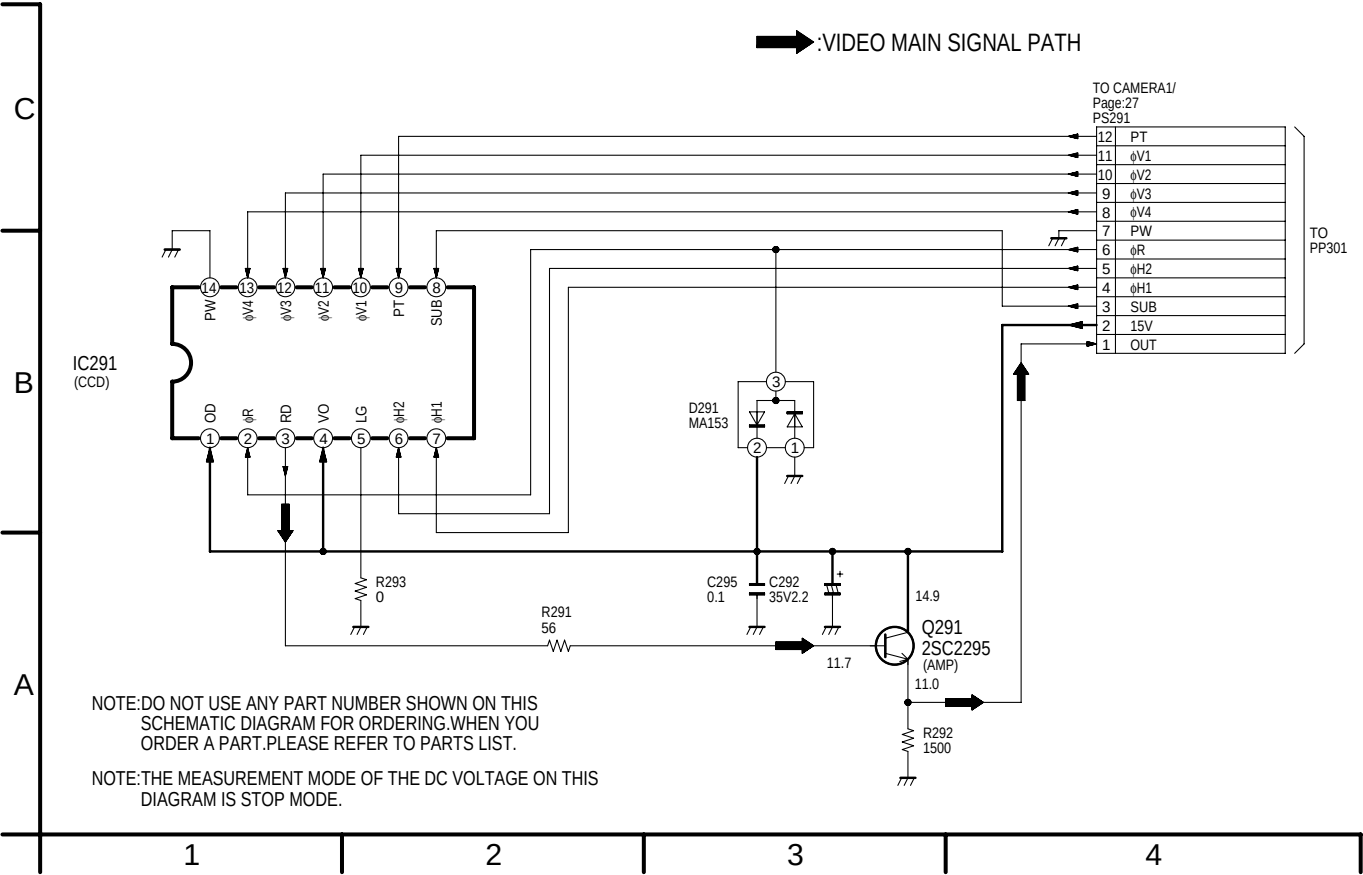


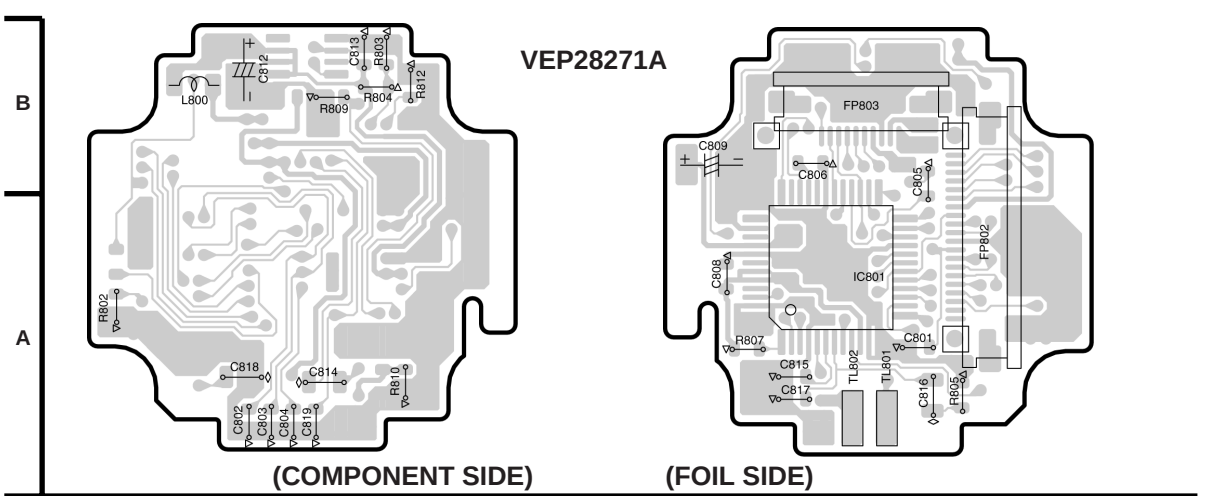
B

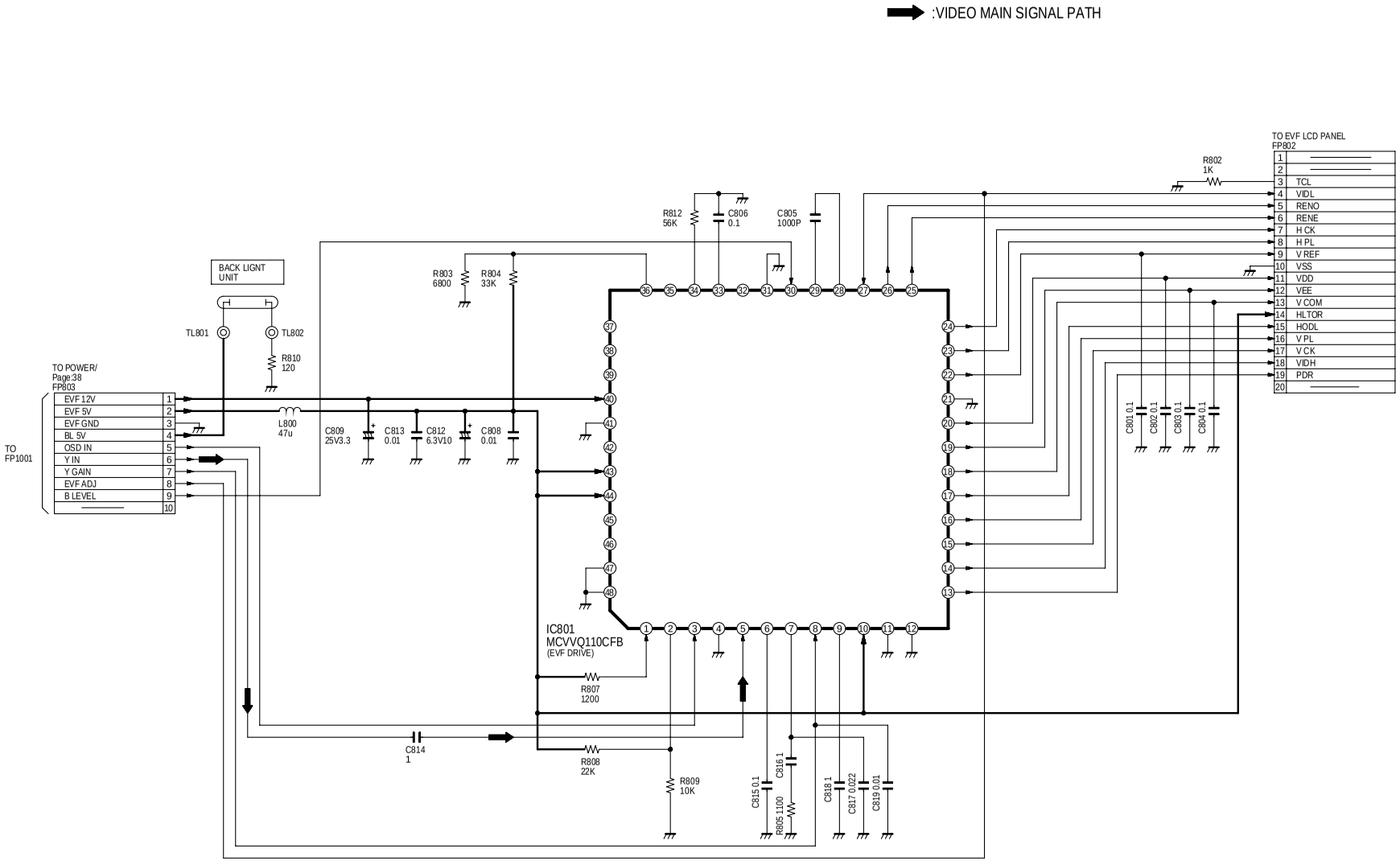
A

1

2

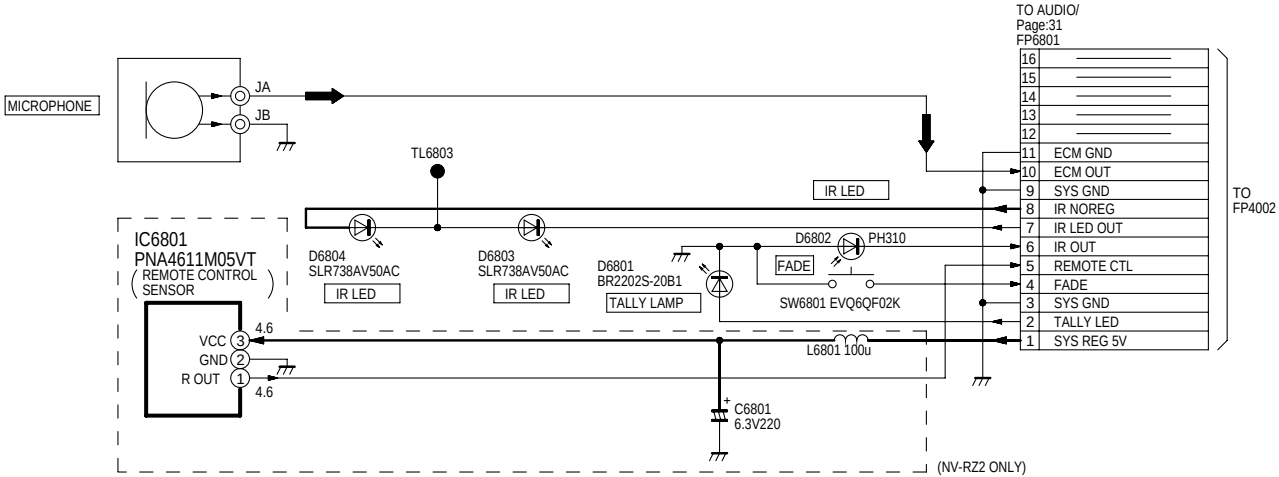

:VIDEO MAIN SIGNAL PATH
TO CAMERA1/
Page:27
PS291
12 PT
11 φV1
10 φV2
9 φV3
8 φV4
7 PW
6 φR
5 φH2
4 φH1
3 SUB
2 15V
1 OUT
TO
PP301
IC291
(CCD)
14 PW
13 φV4
12 φV3
11 φV2
10 φV1
9 PT
8 SUB
1 OD
2 φR
3 RD
4 VO
5 LG
6 φH2
7 φH1
D291
MA153
R293
0
R291
56
C295
0.1
C292
35V2.2
14.9
Q291
2SC2295
(AMP)
11.7
11.0
R292
1500
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART.PLEASE REFER TO PARTS LIST.
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.
C
B
A
1
2
3
4


VEP28271A
B
A
L800
C812
C813
R803
R812
R809
R804
R802
C818
C814
R810
C802
C803
C804
C819
C809
FP803
C806
C805
FP802
C808
IC801
R807
C801
C815
TL802
TL801
C817
C816
R805
(COMPONENT SIDE)
(FOIL SIDE)
1
2
3
4



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGREM IS STOP MODE.(EVF:ON)



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER APART,PLEASE REFER TO PARS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRAKETS ( )ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

TO POWER/ Page:38
1 NOREG
2 AF GND

TO VIDEO/ Page:32
7 IRIS OPEN

TO CAMERA2/ Page:28
1 REG 4.8V
2 REG 3V
6 CAM GND

TO SYSTEM/ Page:34
92 AF DR EX Z
85 AF DR RST
86 AF DR 4M
87 AF DR SBT
88 AF DR SB0
89 AF DR CS
90 AF DR VD
91 AF DR EX F
84 O LUX SW

CL702
L703 10u
R717 56
L701 10u
L702 10u
C713 0.1
R706 100K
C705 6.3V10
C715 0.01
C712 6.3V10
R703 100K
C711 16V47
R701 4.7
R702 4.7

IC701
UPD16878GSE1
(MOTOR DRIVE)

RESET OSCOUT OSCIN SCLK SDATA LATCH VD EXTZ B2 FBB B1 VM2 A2 FBA A1 VM1 EXTF EXP3 PGND
H BRIDGE 2ch
H BRIDGE 1ch
EXTOUT SELECTOR
1/N
PULSE GENERATER
EVR1 EVR2 EVR1 EVR2
CURRENT SET CURRENT SET
OSC
SELECTOR
FILTER FILTER FILTER FILTER
X2
SERIAL-PARARELLE DECODER
LGND COSC FILA FILB FILC FILD VREF VDD VM3 D2 FBD D1 VM4 C2 FBC C1 EXP0 EXP1 EXP2
C701 100P C704 0.1 C706 0.1 C707 0.1 C708 0.1
R704 4.7
R705 4.7
R712 10K
C709 0.1
R714 1K

R709 10K
R716 1K
R718 22K
C702 0.22
C719 1000P
R743 7500
Q704
2SC2712GRL
(AMP)
IC706
NJM2115V
VCC GND
R745 10K
R722 1500
C721 6800P
R723 220
R761 2200
R726 680
C703 0.1
IC711
TA75W01FU
VCC GND
R736 680K
R713 2200
R735 12K
R727 27K
R738 150K
R734 12K
R729 33K
R737 680K
R740 120K
R728 10K
R730 8200
R733 560K
R732 27K
R731 68K

QR781
UN2130X
(SWITCHING NOREG)

RA704 47K(X2)
R784 2200
R781 1K
Q781
2SA1832FYTH3
(LED DRIVE)
R782 1200
R707 100
QR701
RN1102FTPH3
(LED DRIVE)
Q780
2SD874
(LED DRIVE)
R780 15
QR782
RN2102FTPH3
(INV.)
R785 2200
R783 15

TO LENS FLEX. FP701
LED CTL 21
Z ENC 20
F ENC VCC 19
F ENC 18
ZM T4 17
ZM T1 16
ZM T2 15
ZM T3 14
O LUX SW 13
FM T4 12
FM T1 11
FM T2 10
FM T3 9
ALC MAIN(-) 8
ALC CTL(-) 7
HALL IN(+) 6
HALL OUT(-) 5
HALL IN(-) 4
HALL OUT(+) 3
ALC MAIN(+) 2
ALC CTL(+) 1

TO VIDEO/ Page:32
FNO 6

TO CAMERA2/ Page:28
PWM(A) 4
V REF (L) 3
V REF (H) 5

TO CAMERA1/ Page:27
HALL BIAS 29
HALL GAIN 30

TO SYSTEM/ Page:34
Z ENC 94
LED CTL 96
ABSF 95
O LUX CTL 93

TO AUDIO/ Page:31
IR NOREG 6
IR LED OUT 5

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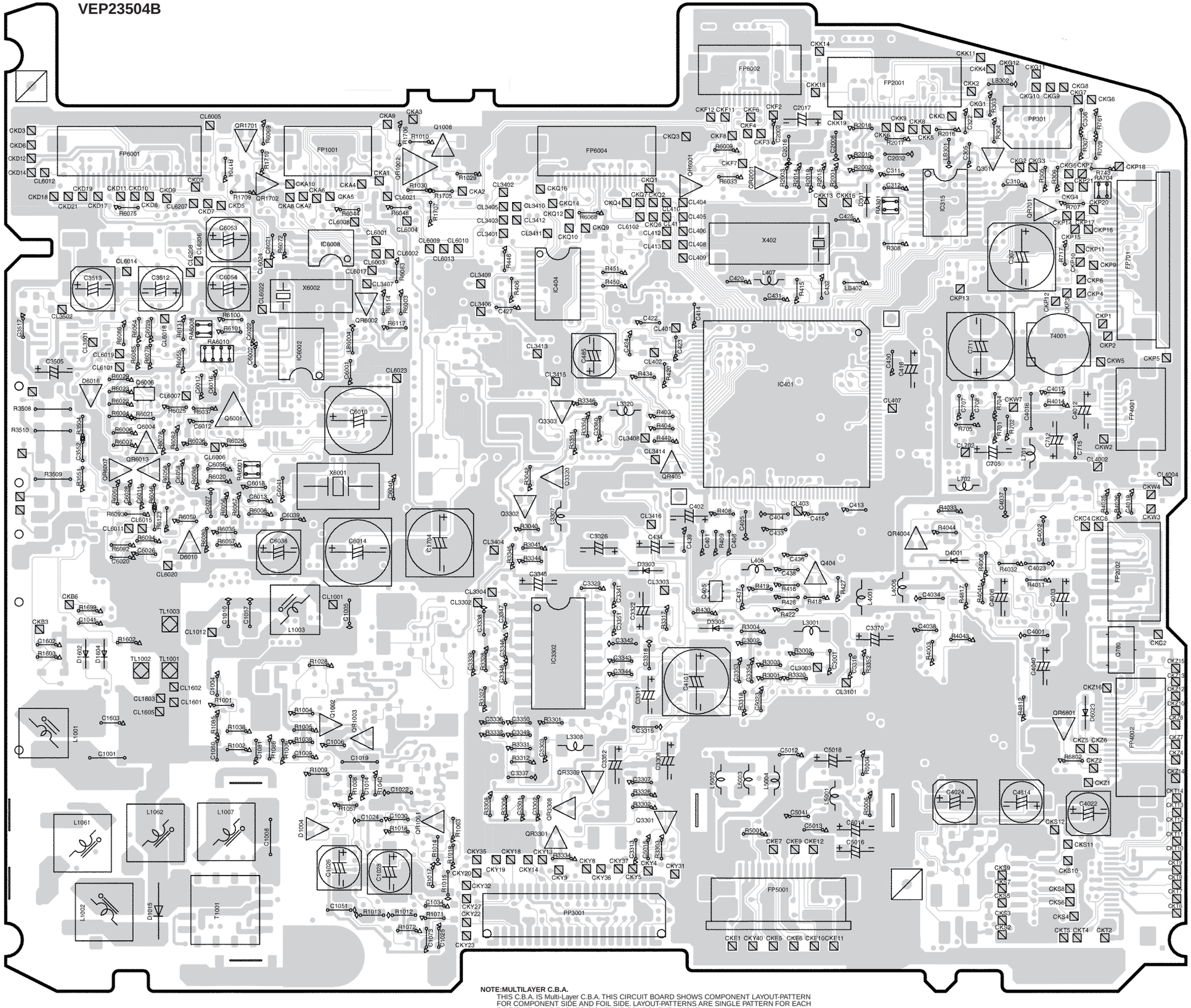
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

VEP23504B



NOTE:MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

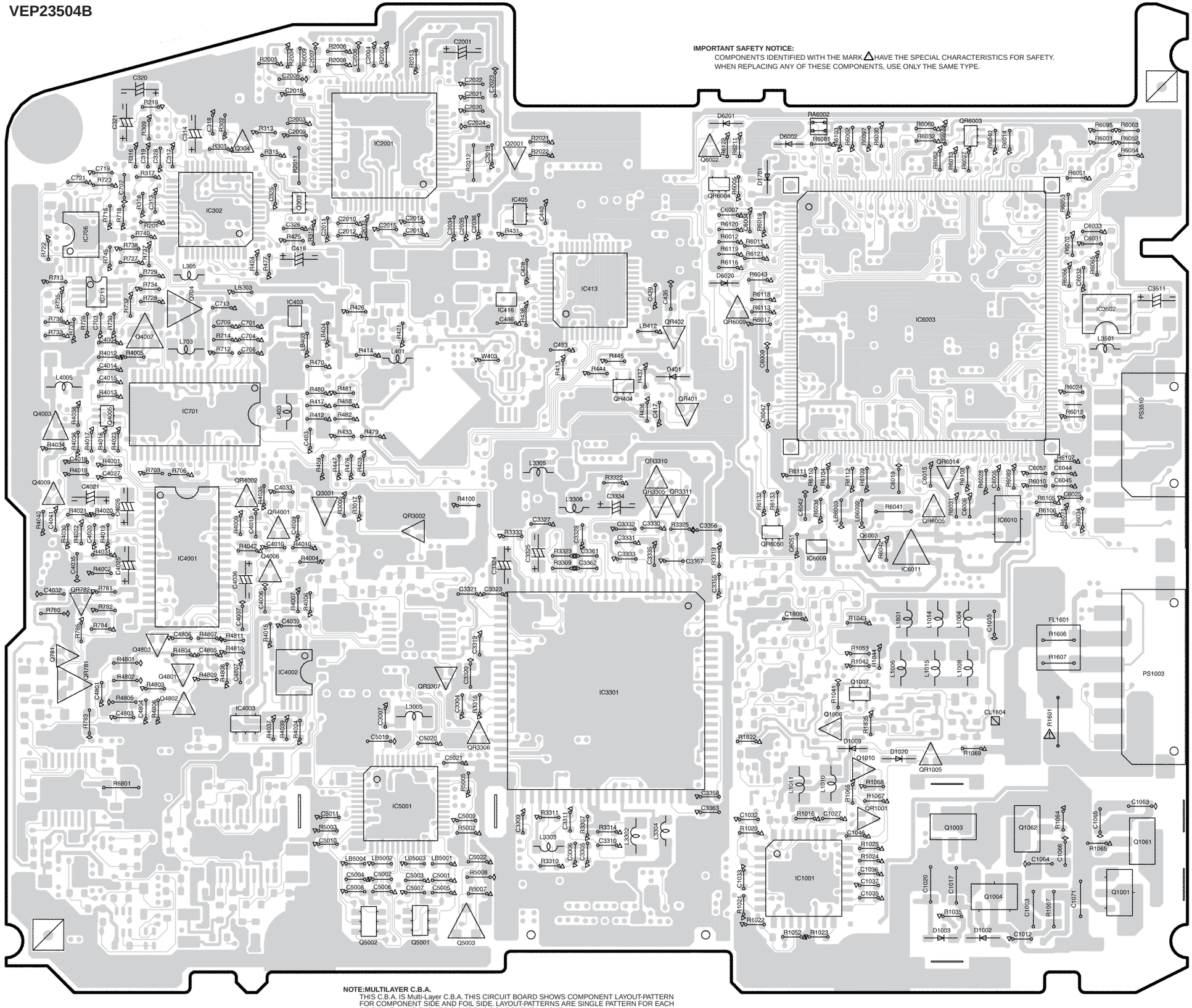
(COMPONENT SIDE)

F E D C B A

1 2 3 4 5 6 7

VEP23504B

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



NOTE:MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

(FOIL SIDE)

F E D C B A

1 2 3 4 5 6 7

Camera/Main C.B.A.

Integrated Circuit

IC302	E-2	F
IC315	E-6	C
IC401	D-5	C
IC403	E-2	F
IC404	E-4	C
IC405	E-4	F
IC413	E-4	F
IC416	E-4	F
IC701	D-2	F
IC706	E-1	F
IC711	E-1	F
IC1001	A-5	F
IC2001	F-3	F
IC3301	C-4	F
IC3302	C-4	C
IC3502	E-7	F
IC4001	C-2	F
IC4002	C-2	F
IC4003	B-2	F
IC5001	B-3	F
IC6002	D-2	C
IC6003	E-6	F
IC6008	E-3	C
IC6009	C-5	F
IC6010	D-7	F
IC6011	C-6	F

Transistor

Q301	F-7	C
Q303	E-2	F
Q304	F-2	F
Q404	C-5	C
Q405	C-5	C
Q704	E-2	F
Q780	C-7	C
Q781	C-1	F
Q1001	A-7	F
Q1002	B-3	C
Q1003	B-6	F
Q1004	A-7	F
Q1006	B-6	F
Q1007	B-6	F
Q1008	F-3	C
Q1010	B-6	F
Q1061	B-7	F
Q1062	B-7	F
Q1702	F-2	C
Q2001	F-4	F
Q3001	D-3	F
Q3301	B-5	C
Q3302	D-4	C
Q3303	D-4	C
Q3320	D-4	C
Q4002	E-2	F
Q4003	D-1	F
Q4005	D-1	F
Q4006	C-2	F
Q4009	D-1	F
Q4801	C-2	F
Q4802	B-2	F
Q4803	C-2	F
Q5001	A-3	F
Q5002	A-3	F
Q5003	A-3	F
Q6001	D-2	C
Q6002	F-5	F
Q6003	C-6	F
Q6004	D-2	C
Q6006	D-2	C

Transistor & Resistor

QR401	D-5	F
QR402	E-5	F
QR404	D-4	F
QR405	D-5	C
QR701	E-7	C
QR781	C-1	F
QR782	C-1	F
QR1001	B-6	F
QR1002	F-3	C
QR1003	B-3	C
QR1005	B-6	F
QR1061	B-3	C
QR1701	F-2	C
QR2001	F-5	C
QR3002	C-3	F
QR3301	B-4	C
QR3305	D-5	F
QR3306	B-4	F
QR3307	C-3	F
QR3308	B-4	C
QR3309	B-4	C
QR3310	D-5	F
QR3311	D-5	F
QR4001	C-2	F
QR4002	D-2	F
QR4004	C-6	C
QR6001	E-5	C
QR6002	E-3	C
QR6003	F-6	F
QR6004	E-5	F
QR6005	D-6	F
QR6007	D-1	C
QR6009	E-5	F
QR6013	D-2	C
QR6014	D-6	F
QR6050	C-5	F
QR6801	B-7	C

Connector

FP701	E-7	C
FP1001	F-3	C
FP2001	F-6	C
FP2002	C-7	C
FP4001	D-7	C
FP4002	B-7	C
FP5001	A-5	C
FP6001	F-2	C
FP6002	F-5	C
FP6004	F-4	C
PP301	F-7	C
PP3001	A-4	C
PS1003	C-7	F
PS3510	D-7	F

Test Point

CKA1	F-3	C
CKA2	E-3	C
CKA3	F-3	C
CKA4	E-3	C
CKA5	E-3	C
CKA6	E-3	C
CKA7	E-3	C
CKA8	E-2	C
CKA9	F-3	C
CKA10	E-2	C
CKB3	C-1	C
CKB6	C-1	C
CKC2	C-7	C
CKC4	C-7	C
CKC6	C-7	C
CKD2	E-2	C
CKD3	F-1	C
CKD5	E-2	C
CKD6	F-1	C
CKD7	E-2	C
CKD8	E-2	C
CKD9	E-2	C
CKD10	E-2	C
CKD11	E-1	C
CKD12	F-1	C
CKD14	F-1	C
CKD17	E-1	C
CKD18	E-1	C
CKD19	E-1	C
CKD21	E-1	C
CKE1	A-5	C
CKE5	A-5	C
CKE6	A-5	C
CKE7	B-5	C
CKE9	B-5	C
CKE10	A-5	C
CKE11	A-6	C
CKE12	B-5	C
CKF2	F-5	C
CKF3	F-5	C
CKF4	F-5	C
CKF6	F-5	C
CKF7	F-5	C
CKF8	F-5	C
CKF11	F-5	C
CKF12	F-5	C
CKG1	F-6	C
CKG2	F-7	C
CKG3	F-7	C
CKG4	E-7	C
CKG5	F-7	C
CKG6	F-7	C
CKG7	F-7	C
CKG8	F-7	C
CKG9	F-7	C
CKG10	F-7	C
CKG11	F-7	C
CKG12	F-7	C
CKJ1	D-1	C
CKJ2	D-1	C
CKJ4	D-1	C
CKJ6	D-1	C
CKK2	F-6	C
CKK3	F-6	C
CKK4	F-7	C
CKK5	F-6	C
CKK6	F-6	C
CKK8	F-6	C
CKK9	F-6	C
CKK11	F-6	C
CKK13	E-6	C
CKK14	F-6	C
CKK16	E-6	C
CKK18	F-5	C
CKK19	F-6	C
CKP1	E-7	C
CKP2	E-7	C
CKP3	E-7	C
CKP4	E-7	C
CKP5	D-7	C
CKP6	E-7	C
CKP7	F-7	C
CKP9	E-7	C
CKP10	E-7	C
CKP11	E-7	C
CKP12	E-7	C
CKP13	E-6	C
CKP14	E-7	C
CKP15	E-7	C
CKP16	E-7	C
CKP17	E-7	C
CKP18	F-7	C
CKP20	E-7	C
CKP21	E-7	C
CKQ1	E-5	C
CKQ2	E-5	C
CKQ3	F-5	C
CKQ4	E-4	C
CKQ6	E-5	C
CKQ7	E-4	C
CKQ9	E-4	C
CKQ10	E-4	C
CKQ12	E-4	C
CKQ14	E-4	C
CKQ16	E-4	C
CKS2	A-7	C
CKS3	A-7	C
CKS4	A-7	C
CKS5	A-7	C
CKS6	A-7	C
CKS7	A-7	C
CKS8	A-7	C
CKS9	A-7	C
CKS10	B-7	C
CKS11	B-7	C
CKS12	B-7	C
CKT2	A-7	C
CKT4	A-7	C
CKT5	A-7	C
CKT6	A-7	C
CKT7	A-7	C
CKT8	A-7	C
CKT9	A-7	C
CKT10	B-7	C
CKT11	B-7	C
CKT12	B-7	C
CKT13	B-7	C
CKT14	B-7	C
CKW2	D-7	C
CKW3	D-7	C
CKW4	D-7	C
CKW5	D-7	C
CKW7	D-7	C
CKY4	A-5	C
CKY5	B-4	C
CKY8	B-4	C
CKY9	A-4	C
CKY13	B-4	C
CKY14	B-4	C
CKY18	B-4	C
CKY19	B-4	C
CKY20	A-4	C
CKY22	A-3	C
CKY23	A-3	C
CKY27	A-3	C
CKY31	A-5	C
CKY32	A-3	C
CKY35	B-4	C
CKY36	B-4	C
CKY37	B-4	C
CKY40	A-5	C
CKZ1	B-7	C
CKZ2	B-7	C
CKZ4	B-7	C
CKZ5	B-7	C
CKZ6	B-7	C
CKZ7	B-7	C
CKZ8	B-7	C
CKZ10	B-7	C
CKZ12	C-7	C
CKZ13	C-7	C
CKZ14	B-7	C
CKZ15	C-7	C
CKZ16	C-7	C
CL401	E-5	C
CL402	E-5	C
CL403	D-5	C
CL404	E-5	C
CL405	E-5	C
CL406	E-5	C
CL407	D-6	C
CL408	E-5	C
CL409	E-5	C
CL410	E-5	C
CL411	E-5	C
CL412	E-5	C
CL413	E-5	C
CL702	D-6	C
CL1001	C-3	C
CL1012	C-2	C
CL1601	B-2	C
CL1602	C-2	C
CL1603	B-2	C
CL1604	B-7	F
CL1605	B-2	C
CL3003	C-5	C
CL3101	C-6	C
CL3302	C-4	C
CL3303	C-5	C
CL3304	C-4	C
CL3401	E-4	C
CL3402	E-4	C
CL3403	E-4	C
CL3404	C-4	C
CL3405	E-4	C
CL3406	E-4	C
CL3407	E-3	C
CL3408	D-4	C
CL3409	E-4	C
CL3410	E-4	C
CL3411	E-4	C
CL3412	E-4	C
CL3413	E-4	C
CL3414	D-5	C
CL3415	D-4	C
CL3416	D-5	C
CL3501	E-1	C
CL3502	E-1	C
CL4002	D-7	C
CL4004	D-7	C
CL6001	E-3	C
CL6002	E-3	C
CL6003	E-3	C
CL6004	E-3	C
CL6005	F-2	C
CL6006	D-2	C
CL6007	D-2	C
CL6008	E-3	C
CL6009	E-3	C
CL6010	E-3	C
CL6011	C-2	C
CL6012	F-1	C
CL6013	E-3	C
CL6014	E-1	C
CL6015	C-2	C
CL6017	E-3	C
CL6018	E-2	C
CL6019	E-1	C
CL6020	C-2	C
CL6021	E-3	C
CL6022	E-2	C
CL6023	D-3	C
CL6024	E-2	C
CL6101	D-1	C
CL6102	E-4	C
CL6206	E-2	C
CL6207	E-2	C
CL6208	E-2	C
TL1002	C-2	C
TL1003	C-2	C
TL1003	C-2	C

Diode

D301	E-6	C
D401	D-5	F
D1002	A-6	F
D1003	A-6	F
D1004	B-3	C
D1009	B-6	F
D1015	A-2	C
D1020	B-6	F
D1602	C-1	C
D1604	C-1	C
D1701	F-5	F
D3303	C-4	C
D3305	C-5	C
D4001	C-6	C
D6002	F-5	F
D6010	C-2	C
D6016	D-1	C
D6020	E-5	F
D6023	B-7	C
D6201	F-5	F

Filter

FL1601	C-7	F

Coil

L305	E-2	F
L401	D-3	F
L403	D-2	F
L407	E-5	C
L408	C-5	C
L701	D-7	C
L702	D-6	C
L703	E-2	F
L1001	B-1	C
L1002	A-1	C
L1003	C-2	C
L1004	C-6	F
L1006	C-6	F
L1007	B-2	C
L1008	C-6	F
L1010	B-6	F
L1011	B-5	F
L1014	C-6	F
L1015	C-6	F
L1061	B-1	C
L1062	B-2	C
L1801	C-6	F
L3001	C-5	C
L3005	B-3	F
L3302	B-4	F
L3303	B-4	F
L3304	B-5	F
L3305	D-4	F
L3306	D-4	F
L3307	D-4	C
L3308	B-4	C
L3320	D-4	C
L3501	E-7	F
L4001	C-6	C
L4005	D-1	F
L4006	C-6	C
L5001	B-6	C
L5002	B-5	C
L5003	B-5	C
L5004	B-5	C
LB301	F-6	C
LB302	F-7	C
LB303	E-2	F
LB402	E-6	C
LB403	E-3	F
LB404	E-3	F
LB412	E-5	F
LB5001	B-3	F
LB5002	B-3	F
LB5003	B-3	F
LB5004	B-3	F
LB6002	D-6	F
LB6003	D-6	F
LB6004	E-3	C

Transformer

T1001	A-2	C
T4001	E-7	C

Crystal Oscillator

X402	E-5	C
X6001	D-3	C
X6002	E-3	C

Capacitor

C305	F-6	C
C306	F-7	C
C307	E-7	C
C310	E-7	C
C311	F-6	C
C312	E-6	C
C313	E-2	F
C314	F-2	F
C317	F-2	F
C318	F-2	F
C319	F-2	F
C320	F-2	F
C321	F-1	F
C322	F-6	C
C325	E-2	F
C326	E-2	F
C328	F-2	F
C401	C-5	C
C402	D-5	C
C403	D-3	F
C404	D-5	C
C405	D-5	C
C408	C-5	C
C413	D-6	C
C414	E-5	C
C415	D-5	C
C416	D-6	C
C417	D-5	F
C418	E-2	F
C420	E-5	C
C422	E-5	C
C423	E-5	C
C424	E-4	C
C425	E-6	C
C427	E-4	C
C428	E-4	F
C429	E-5	F
C430	D-6	C
C431	E-5	C
C432	E-6	C
C433	C-5	C
C434	C-5	C
C435	E-5	F
C436	C-5	C
C437	C-5	C
C438	C-5	C
C439	C-5	C
C440	E-4	F
C483	E-4	F
C485	D-4	C
C486	E-4	F
C701	E-2	F
C702	E-1	F
C703	E-1	F
C704	E-2	F
C705	D-7	C
C706	D-2	F
C707	D-6	C
C708	D-6	C
C709	E-2	F
C711	E-6	C
C712	D-7	C
C713	E-2	F
C715	D-7	C
C719	F-1	F
C721	E-1	F
C1001	B-1	C
C1003	A-7	F
C1004	C-2	C
C1005	C-3	C
C1006	B-3	C
C1008	B-2	C
C1009	B-3	C
C1010	C-2	C
C1012	A-7	F
C1014	B-3	C
C1017	A-6	F
C1019	B-3	C
C1020	A-6	F
C1022	B-3	C
C1024	B-3	C
C1025	A-3	C
C1026	B-3	C
C1027	B-6	F
C1028	A-3	C
C1030	B-3	C
C1032	B-5	F
C1033	A-5	F
C1034	A-3	C
C1035	A-6	F
C1036	B-6	F
C1037	A-6	F
C1041	C-1	C
C1046	B-6	F
C1051	A-3	C
C1055	C-7	F
C1057	C-2	C
C1063	B-7	F
C1064	B-7	F
C1065	B-7	F
C1066	B-7	F
C1071	A-7	F
C1080	B-2	C
C1081	B-2	C
C1602	C-1	C
C1603	B-1	C
C1704	C-3	C
C2001	F-3	F
C2002	F-5	C
C2003	F-2	F
C2004	F-3	F
C2005	F-2	F
C2006	F-3	F
C2007	F-3	F
C2008	F-6	C
C2009	F-2	F
C2010	E-3	F
C2011	E-3	F
C2012	E-3	F
C2013	E-3	F
C2014	E-3	F
C2015	E-3	F
C2016	F-5	C
C2017	F-5	C
C2018	F-2	F
C2019	F-4	F
C2020	F-4	F
C2021	F-4	F
C2022	F-4	F
C2023	F-4	F
C2024	F-4	F
C2032	F-6	C
C2034	E-3	F
C2035	E-3	F
C2036	E-4	F
C2037	E-3	F
C3001	C-6	C
C3002	C-5	C
C3007	B-3	F
C3301	B-4	C
C3302	B-4	C
C3303	B-4	C
C3304	B-3	F
C3305	B-4	F
C3306	B-4	F
C3307	B-4	C
C3308	B-5	C
C3309	B-4	F
C3310	B-4	F
C3311	B-4	F
C3313	B-4	C
C3315	B-4	C
C3316	C-6	C
C3317	C-5	C
C3318	C-5	C
C3319	C-4	F
C3320	C-3	F
C3321	C-3	F
C3322	C-4	C
C3323	C-4	F
C3324	C-4	F
C3325	C-4	F
C3326	C-4	C
C3327	C-4	F
C3328	C-4	F
C3329	C-4	C
C3330	C-5	F
C3331	C-4	F
C3332	C-4	F
C3333	C-4	F
C3334	D-4	F
C3335	C-5	F
C3336	B-4	C
C3337	B-4	C
C3338	C-4	C
C3339	C-3	C
C3342	C-4	C
C3343	C-4	C
C3344	C-4	C
C3345	C-4	C
C3346	C-4	C
C3347	C-4	C
C3348	C-4	C
C3349	B-4	C
C3350	B-4	C
C3351	C-4	C
C3352	B-4	C
C3353	C-5	C
C3354	C-5	C
C3355	C-5	F
C3356	C-5	F
C3357	C-5	F
C3358	B-5	F
C3361	C-4	F
C3362	C-4	F
C3363	B-5	F
C3370	C-6	C
C3380	D-4	C
C3505	D-1	C
C3511	E-7	F
C3512	E-2	C
C3513	E-1	C
C3517	E-1	C
C3552	D-1	C
C4001	C-7	C
C4002	C-7	C
C4003	C-7	C
C4004	E-1	F
C4006	C-2	F
C4007	C-2	F
C4008	C-7	C
C4009	C-2	F
C4010	C-2	F
C4012	D-7	C
C4013	C-2	F
C4014	D-1	F
C4015	D-1	F
C4016	D-7	C
C4017	D-7	C
C4018	D-1	F
C4019	D-7	C
C4020	C-1	F
C4021	D-1	F
C4022	B-7	C
C4023	C-7	C
C4024	B-6	C
C4025	C-2	F
C4026	D-2	F
C4027	D-1	F
C4032	C-1	F
C4033	D-2	F
C4034	C-6	C
C4035	C-1	F
C4036	C-2	F
C4037	D-7	C
C4038	C-6	C
C4039	C-2	F
C4040	C-7	C
C4041	D-1	F
C4101	C-5	C
C4801	C-1	F
C4803	B-1	F
C4804	B-2	F
C4805	C-2	F
C4806	C-2	F
C4807	C-2	F
C4814	B-7	C
C5001	A-3	F
C5002	A-3	F
C5003	A-3	F
C5004	A-3	F
C5005	A-3	F
C5006	A-3	F
C5007	A-3	F
C5008	A-3	F
C5009	B-3	F
C5010	B-3	F
C5011	B-3	F
C5012	B-5	C
C5013	B-5	C
C5014	B-6	C
C5015	B-5	C
C5016	B-6	C
C5018	B-6	C
C5019	B-3	F
C5020	B-3	F
C5021	B-3	F
C5022	B-4	F
C5023	B-5	C
C5041	B-5	C
C6001	D-3	C
C6002	D-2	C
C6004	E-5	F
C6005	D-7	F
C6006	D-6	F
C6007	E-5	F
C6009	D-5	F
C6010	D-3	C
C6011	D-2	C
C6012	D-2	C
C6013	D-2	C
C6014	C-3	C
C6015	D-6	F
C6016	D-2	C
C6017	D-2	C
C6018	D-2	C
C6019	D-6	F
C6020	C-1	C
C6021	E-2	C
C6022	E-2	C
C6025	D-7	F
C6026	C-2	C
C6027	D-2	C
C6028	D-2	C
C6029	E-2	C
C6031	E-7	F
C6032	E-7	F
C6033	E-7	F
C6038	C-2	C
C6039	D-2	C
C6040	D-3	C
C6041	D-2	C
C6042	D-5	F
C6044	D-7	F
C6045	D-7	F
C6047	D-5	F
C6051	C-5	F
C6053	E-2	C
C6054	E-2	C
C6056	D-2	C
C6057	D-7	F
C6058	D-2	C

Resistor

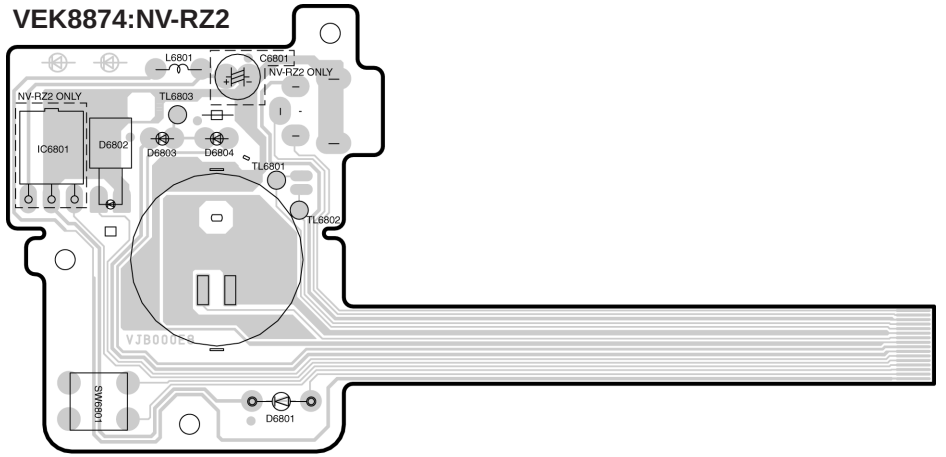
R201	E-2	F
R219	F-2	F
R301	F-2	F
R302	F-2	F
R303	F-6	C
R304	F-7	C
R305	F-7	C
R306	F-7	C
R307	F-7	C
R308	E-6	C
R309	F-2	F
R312	E-3	F
R313	F-2	F
R315	F-2	F
R316	F-2	F
R317	F-2	F
R318	E-2	F
R403	D-5	C
R404	D-5	C
R406	E-4	C
R408	D-5	C
R409	C-5	C
R412	D-3	F
R413	D-4	F
R414	D-3	F
R415	E-5	C
R416	C-5	C
R417	D-3	F
R418	C-5	C
R419	C-5	C
R420	D-5	C
R421	E-3	F
R422	C-5	C
R423	D-3	F
R424	E-2	F
R425	E-2	F
R426	E-3	F
R427	C-6	C
R428	C-5	C
R430	C-5	C
R431	E-4	F
R433	D-3	F
R434	D-4	C
R436	D-5	F
R437	D-4	F
R438	E-4	F
R440	D-5	C
R444	D-4	F
R445	D-4	F
R446	E-4	C
R447	D-3	F
R450	E-4	C
R451	E-4	C
R458	D-3	F
R459	D-3	F
R470	D-3	F
R476	D-3	F
R477	E-2	F
R479	D-3	F
R480	D-3	F
R481	D-3	F
R482	D-3	F
R701	D-7	C
R702	D-7	C
R703	D-2	F
R704	D-7	C
R705	D-6	C
R706	D-2	F
R707	E-7	C
R709	F-7	C
R712	D-2	F
R713	E-1	F
R714	E-2	F
R716	E-1	F
R717	E-7	C
R718	E-1	F
R722	E-1	F
R723	E-1	F
R726	E-1	F
R727	E-2	F
R728	E-2	F
R729	E-2	F
R730	E-1	F
R731	E-1	F
R732	E-2	F
R733	E-1	F
R734	E-2	F
R735	E-1	F
R736	E-1	F
R737	E-2	F
R738	E-2	F
R740	E-2	F
R743	F-7	C
R745	E-1	F
R761	F-7	C
R780	C-1	F
R781	C-1	F
R782	C-1	F
R783	B-1	F
R784	C-1	F
R785	C-1	F
R1001	B-2	C
R1002	B-2	C
R1004	B-3	C
R1005	B-3	C
R1006	B-2	C
R1007	A-7	F
R1008	B-3	C
R1009	B-3	C
R1010	F-3	C
R1012	A-3	C
R1013	A-3	C
R1014	B-3	C
R1015	A-3	C
R1016	B-5	F
R1017	A-3	C
R1018	B-3	C
R1019	B-3	C
R1020	B-5	F
R1021	A-5	F
R1022	A-5	F
R1023	A-5	F
R1024	B-6	F
R1025	B-6	F
R1028	C-3	C
R1029	F-3	C
R1030	E-3	C
R1035	A-6	F
R1038	B-2	C
R1039	B-3	C
R1040	B-3	C
R1041	B-6	F
R1042	C-6	F
R1043	C-6	F
R1044	C-6	F
R1052	A-5	F
R1053	C-6	F
R1057	B-3	C
R1063	B-3	C
R1064	B-7	F
R1065	B-7	F
R1066	B-6	F
R1067	B-6	F
R1068	B-6	F
R1069	B-6	F
R1071	A-3	C
R1072	A-3	C
R1073	A-3	C
R1085	B-2	C
R1086	B-2	C
R1601	B-7	F
R1602	C-1	C
R1603	C-1	C
R1606	C-7	F
R1607	C-7	F
R1699	C-1	C
R1704	F-2	C
R1705	E-3	C
R1706	F-3	C
R1707	E-3	C
R1709	E-2	C
R1710	F-2	C
R1822	B-5	F
R1835	B-6	F
R2001	F-6	C
R2002	F-6	C
R2003	F-5	C
R2004	F-2	F
R2005	F-2	F
R2006	F-3	F
R2007	F-3	F
R2008	F-3	F
R2009	F-3	F
R2010	F-6	C
R2011	F-2	F
R2012	F-4	F
R2013	F-3	F
R2014	F-5	C
R2015	F-6	C
R2016	F-6	C
R2017	F-6	C
R2018	F-6	C
R2019	F-5	C
R2021	F-4	F
R2022	F-4	F
R3001	C-5	C
R3002	C-5	C
R3003	C-5	C
R3004	C-5	C
R3005	D-3	F
R3017	D-3	F
R3040	C-4	C
R3041	C-4	C
R3042	D-4	C
R3301	B-4	C
R3302	B-4	C
R3303	B-5	C
R3306	B-4	C
R3307	B-4	F
R3308	B-4	C
R3309	C-4	F
R3310	A-4	F
R3311	B-4	F
R3312	B-4	C
R3314	B-4	F
R3316	B-4	F
R3317	C-5	C
R3318	B-5	C
R3319	C-5	F
R3320	C-5	C
R3322	D-4	F
R3323	C-4	F
R3325	C-5	F
R3326	B-4	C
R3327	C-4	C
R3328	C-4	C
R3331	B-4	C
R3332	B-4	C
R3333	C-4	F
R3334	B-4	C
R3344	C-4	C
R3345	C-4	C
R3346	D-4	C
R3350	D-4	C
R3351	D-4	C
R3352	C-6	C
R3504	D-1	C
R3508	D-1	C
R3509	D-1	C
R3510	D-1	C
R3551	D-1	C
R4001	D-1	F
R4002	C-1	F
R4003	C-6	C
R4004	C-3	F
R4005	D-2	F
R4006	C-3	F
R4007	C-2	F
R4008	C-6	C
R4009	C-2	F
R4010	C-3	F
R4011	C-7	C
R4012	D-1	F
R4013	D-1	F
R4014	D-7	C
R4015	C-2	F
R4016	D-1	F
R4017	D-1	F
R4018	D-1	F
R4019	C-1	F
R4020	D-1	F
R4021	D-1	F
R4022	C-1	F
R4023	D-1	F
R4024	B-3	F
R4025	D-7	C
R4026	D-7	C
R4030	C-1	F
R4031	C-1	F
R4032	C-7	C
R4033	D-6	C
R4034	D-1	F
R4035	D-2	F
R4036	D-1	F
R4037	B-2	F
R4038	D-1	F
R4039	B-2	F
R4040	D-1	F
R4041	C-6	C
R4042	C-2	F
R4043	C-6	C
R4044	C-6	C
R4110	D-3	F
R4801	C-1	F
R4802	C-1	F
R4803	C-2	F
R4804	C-2	F
R4805	B-1	F
R4806	B-2	F
R4807	C-2	F
R4808	C-2	F
R4809	C-2	F
R4810	C-2	F
R4811	C-2	F
R4812	B-7	C
R4817	C-6	C
R5001	B-5	C
R5002	B-3	F
R5003	B-3	F
R5004	B-6	C
R5005	B-3	F
R5006	B-6	C
R5007	A-4	F
R5008	A-4	F
R6001	F-7	F
R6002	F-6	F
R6003	E-3	C
R6004	D-1	C
R6005	E-5	F
R6006	D-1	C
R6007	D-1	C
R6008	D-2	C
R6009	F-5	C
R6010	D-7	F
R6011	E-5	F
R6012	E-5	F
R6013	F-6	F
R6014	F-7	F
R6017	E-5	F
R6018	D-7	F
R6019	E-5	F
R6020	D-2	C
R6021	D-2	C
R6022	D-1	C
R6023	D-1	C
R6024	D-7	F
R6025	D-2	C
R6026	D-2	C
R6027	F-6	F
R6028	D-6	F
R6029	D-1	C
R6030	F-6	F
R6031	D-6	F
R6032	F-6	F
R6033	F-5	C
R6034	D-7	F
R6035	C-2	C
R6036	D-2	C
R6037	D-2	C
R6038	D-6	F
R6039	F-6	F
R6040	F-7	F
R6041	D-6	F
R6042	C-6	F
R6043	E-5	F
R6044	E-3	C
R6046	D-2	C
R6048	E-3	C
R6051	F-7	F
R6052	F-7	F
R6053	E-7	F
R6054	F-7	F
R6055	D-2	C
R6056	D-2	C
R6057	C-2	C
R6058	D-2	C
R6059	D-2	C
R6060	F-6	F
R6061	D-1	C
R6062	F-6	F
R6063	F-7	F
R6064	E-2	C
R6065	E-7	F
R6066	E-7	F
R6067	D-2	C
R6068	E-4	C
R6069	F-2	C
R6070	E-7	F
R6071	D-7	F
R6072	E-2	C
R6075	E-2	C
R6078	D-2	C
R6079	D-2	C
R6080	C-2	C
R6081	F-6	F
R6082	D-2	C
R6083	E-3	C
R6085	D-2	C
R6086	E-1	C
R6088	D-2	C
R6089	D-7	F
R6092	C-1	C
R6093	D-2	C
R6094	C-2	C
R6095	F-7	F
R6097	F-6	F
R6100	E-2	C
R6101	E-2	C
R6103	F-6	F
R6104	D-6	F
R6105	D-7	F
R6106	D-7	F
R6107	D-7	F
R6108	D-6	F
R6109	D-6	F
R6110	D-5	F
R6111	D-5	F
R6112	D-6	F
R6113	E-5	F
R6114	E-3	C
R6116	E-5	F
R6117	E-3	C
R6118	E-5	F
R6119	E-5	F
R6120	E-5	F
R6121	E-5	F
R6122	F-5	F
R6123	D-2	C
R6131	E-2	C
R6132	D-5	F
R6133	D-5	F
R6211	F-5	F
R6801	B-1	F
R6802	B-7	C

Resistor Array

RA301	E-6	C
RA704	E-7	C
RA6001	D-2	C
RA6002	F-5	F
RA6008	E-2	C
RA6010	E-2	C

ADDRESS INFORMATION **C**.....COMPONENT SIDE **F**......FOIL SIDE

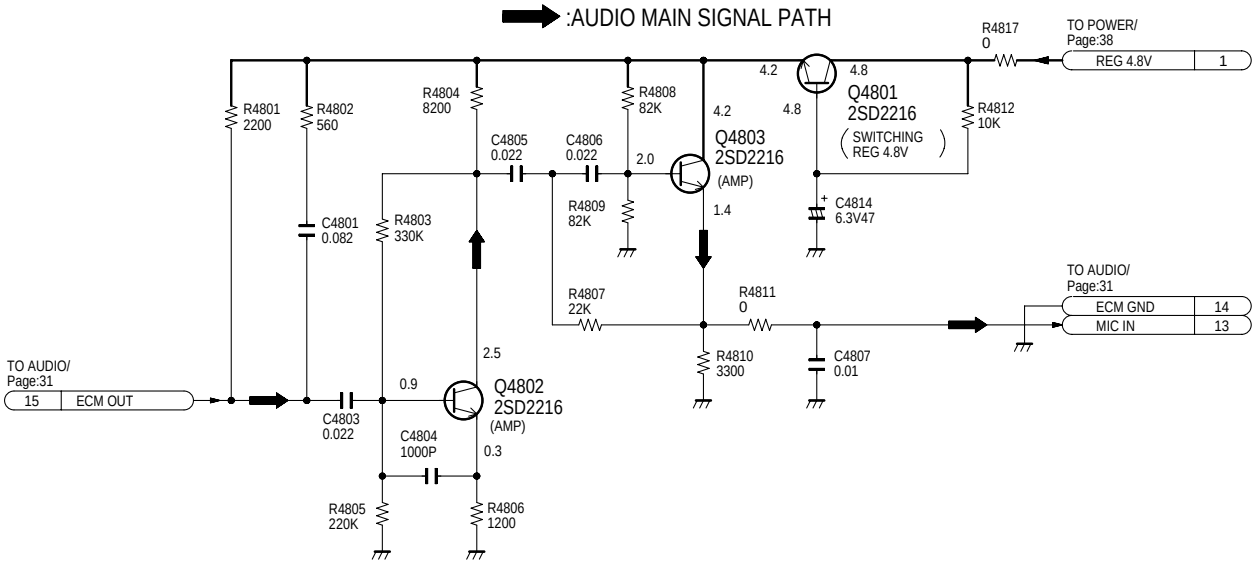
VEK8873:NV-RZ1
VEK8874:NV-RZ2



B

A

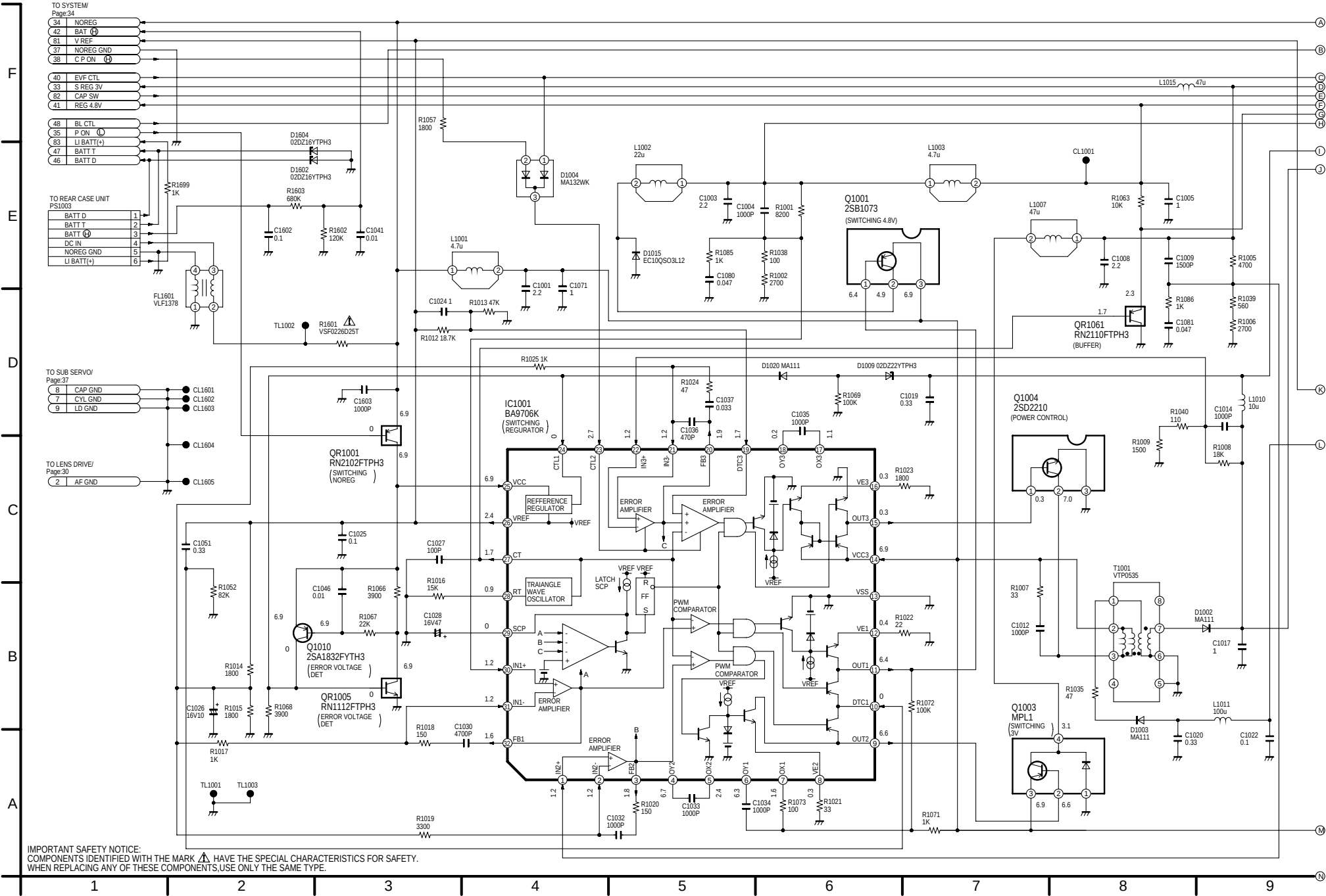
1 2 3



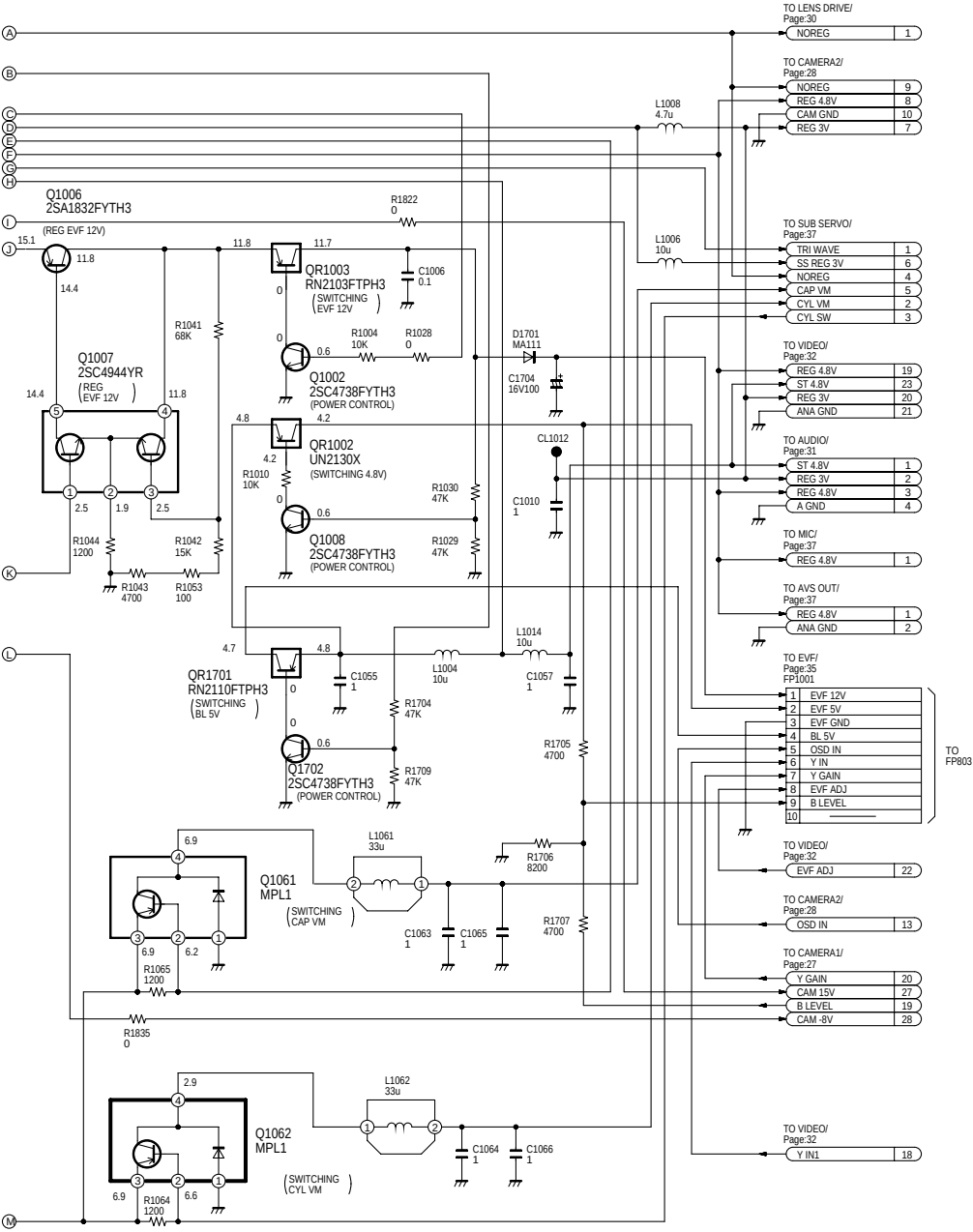
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRAKETS ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

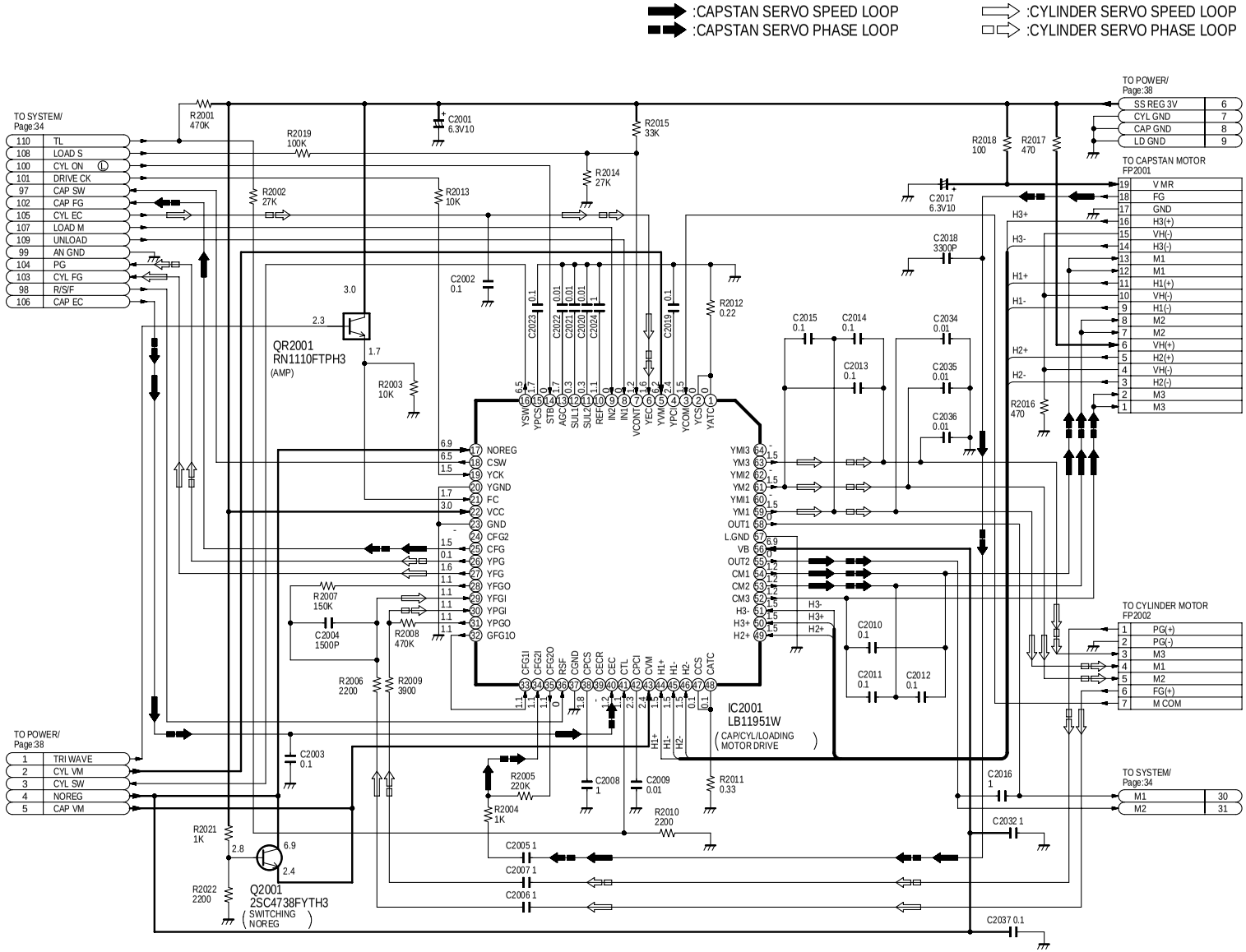


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,USE ONLY THE SAME TYPE.



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.(EVF:ON)



NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

IC6003
(SYSTEM CONTROL & SERVO MICROPROCESSOR)

TO SYSTEM/CAMERA/ SUB SERVO — NOREG
TO SYSTEM/VIDEO/AUDIO/ MIC/CAMERA/ SP DRIVE/AVS OUT — REG 4.8V
TO VIDEO/AUDIO — ST 4.8V
TO EVF — EVF 5V
TO BACK LIGHT — BL 5V
TO VIDEO/CAMERA/ AUDIO — REG 3V
TO SYSTEM — REG 3V
TO CAMERA — REG 3V
TO SUB SERVO — CAP VM
TO SUB SERVO — TRI WAVE
TO CAMERA — CAM 15V
TO CAMERA — CAM -8V

L1003, L1002, L1001, L1014, L1004, L1007, L1008, L1015, L1006, L1061

Q1001 (SWITCHING 4.8V)
Q1003 (SWITCHING 3V)
Q1061 (SWITCHING CAP VM)
Q1004 (POWER CONTROL)

QR1002, QR1701, QR1061
Q1008, QR1003, Q1002
EVF CTL
BL CTL

T1001, CL1003

REAR CASE UNIT
NC, SW
4P SOCKET
LI-ION BATT.
LI BATT.
PS1003 4, PS1003 1, PS1003 2, PS1003 3, PS1003 6
TO IC6002-14

QR1001 (SWITCHING NOREG)
QR6009
Q6007
QR6012

IC1001(SWITCHING REGURATOR)
PWM COMPARATOR &BUFFER
VOLTAGE CTL
REFERENCE VOLTAGE
ERROR AMP
TRI-WAVE OSC
CH1, CH2, CH3
ERROR VOLTAGE INPUT TERMINAL 1
ERROR VOLTAGE INPUT TERMINAL 2
ERROR VOLTAGE INPUT TERMINAL 3

OUT1, IN1+, IN1-, VCC, OUT2, IN2+, IN2-, CT, V.REF, OUT3, IN3+, IN3-, CTL2

X6001

BATT D (90)
BATT T (97)
BAT (17) H
POWER ON (76) H
BATT AD (105)
B REF AD (104)
CP ON (109) H
OSC1 (95)
OSC2 (96)
EVF CTL (151)
BL CTL (59)

IC6002
(RTC/REG/RESET)
TO IC404-3
TO IC404-1
VTRSBT (211), VTRSBO (213), VTRSBI (214), ADCS (154), TM1M (118), XON/H (171), CHGCNT (147), VDD (73), VDD (121), VDD (156), VDD (173), VDD (199), RESET (60)
SCLK (5), SIO (4), CE (3), INTR (2), /VR2EN (10), /CHGEN (9), VRG1 (1), /VDRG (6)
OSC IN (13), OSC OUT (12), X6002
LITHIUM BATTERY
VSB (14)
VMB (16)
IC6010
5V REG

VDDH (15), VDDB (51), VDDB (69), PVDD (50), VDDH (57), VDDH (85), AVDD (109), VDDH (140), VDDH (186), VDDH (212)
IC6009
RESET

CAS DOWN (29)
FP6001 19
CASSETTE DOWN SW

Q6003,QR6005
SENSOR LED (75)
LED DRIVE
FP6001 7, FP6001 16
SUPPLY PHOTO TR.
SENSOR LED

SPHT AD (101)
FP6001 17

TAKE-UP REEL PULSE (19)
FP6001 3, FP6001 2
T REEL SENSOR

SUPPLY REEL PULSE (14)
FP6001 6, FP6001 5
S REEL SENSOR

TO CAMERA
IC6008
(EEPROM)
E2BST (194), E2SBO (195), E2SBI (196), E2PCS (188), E2R/B (185)
CK (2), SI (3), SO (4), CS (1), R/B (7)

(A)
(B)

:CAPSTAN SERVO SPEED LOOP
:CAPSTAN SERVO PHASE LOOP
:CYLINDER SERVO SPEED LOOP
:CYLINDER SERVO PHASE LOOP

SYSTEM CTL SECTION
SUB SERVO SECTION
IC2001 (CAP/CYL/LOADING MOTOR DRIVE)

VTR OP.U.
W ZOOM T
DEW SENSOR
REC
SEARCH+ FF
SEARCH- REW
FADE STOP
BLC PLAY
WB PAUSE
S/S
DATA/TITLE
EJECT
POWER/VCR/CAM
FP6004 1 2 3 4 5 6 7 8 9 10 12 14 16
ZM-AD
DEW-AD
SUBREC
KEY1
S/S
DATA/TITLE
EJECT SW
VTR PER
POWER SW

CAMERA OP.U.
MF/TRACKING
SET
MENU
PROG AE
STORE
COLOUR
FP6002 1 2 3 4 5 6 7 8 9 10 11 12 13
VR1
VR2
CAMLED
VCRLED
EFFECT LED
SISLED
AUTOLED
KEY0

MODE SW
FP6001 8 9 10 11
POS-COM
POS-1
POS-2
POS-3

FROM/TO VIDEO
H.SW
ENVGAIN
VORP
ENV AD

FROM POWER
TRI WAVE
QR2001
TRIWAVE
CAP SW
AMP

PB
EE
AUDIO MUTE
AUDIO FADE
TO VIDEO
DELAY REC
R ERASE ON
QR6050
(S TAB H:ON)
SAFETY TAB
FP6001 18
SAFETY SW

CYLINDER DRIVE CLOCK
CYLINDER ON
CYLINDER FG
CYLINDER PG
CYLINDER TORQUE
CL6207
CL6206
CL6012
DRIVE CLOCK
CYLINDER ON
FG
PG
CYLINDER EC

LINE
FACT MODE
REMOTE CTL
TALLY
HASW
LP
FROM/TO VIDEO
VCC

CAPSTAN R H/S M/F L
CAPSTAN TORQUE
TORQUE LIMIT
CL6014
Q6002
BUFFER
CAPSTAN R/S/F
CAPSTAN TORQUE
TORQUE LIMIT

QR6014
CAP SW
TO POWER

CAPSTAN FG
CL6208
FG
FG AMP COMP.

CYL VM
FROM POWER
ACTIVE COIL SWITCHING LOGIC
SLOPE ADDITION
DRIVE TRANSISTOR CONTROL
FG AMP COMPARATOR
PG AMP COMPARATOR
DD CYLINDER MOTOR
FP2002 4 5 3
MAIN COIL 1
MAIN COIL 2
MAIN COIL 3
FP2002 6 1
FG
PG

CAP VM
FROM POWER
DIRECTION LOGIC
DIRECTION DETECTOR
DIRECTION SWITCHING
DRIVE TRANSISTOR CONTROL
MATRIX
LIMITER
DD CAPSTAN MOTOR
FP2001 12,13 7,8 1,2
MAIN COIL 1
MAIN COIL 2
MAIN COIL 3
FP2001 19 18 6
FG
HALL IC1
HALL IC2
HALL IC3
FP2001 11 9 5 3 16 14 10 4 15

TO CAMERA2/ Page:28
1 BEND → A1
2 V1V2 → A2
3 ENC RST → K1

TO CAMERA2/ Page:28
4 ART V → A3
5 SCR (H) → A4

TO AUDIO/ Page:31
13 A MUTE → A8
14 TALLY → A9
15 REMOTE CTL → K5
16 LP (H) → K6
17 REC CTL → K7
18 A FADE → K8
19 SYS GND

TO VIDEO/ Page:32
20 ART V
21 S TAB
22 PB (H) → A10
23 H SW → K9
24 RE ON (H)
25 D REC (H)
26 LP (H) → K10
27 V HEAD CTL → K11
28 GAIN CTL → K12
29 HA SW

TO SUB SERVO/ Page:37
30 M1
31 M2

TO AUDIO/ Page:31
32 D REC (H)

TO VTR OP. FP6004
16 CAM
15 ———
14 VCR
13 ———
12 EJECT
11 ———
10 DATA/TITLE → A11
9 S/S → A12
8 +B
7 KEY 1 → A13
6 SUB REC → A14
5 GND
4 DEW
3 ZOOM(-)
2 ZOOM VR
1 ZOOM(+)

R6068 68K
R6067 68K

TO CAMERA OP. FP6002
13 V REF (L)
12 VR1 → A15
11 VR2 → A16
10 V REF (H)
9 +B
8 CAM LED
7 VCR LED
6 EFFECT LED
5 +B
4 SIS LED
3 AUTO LED
2 KEY 0 → A17
1 GND

TO POWER/ Page:38
33 S REG 3V
34 NOREG
35 P ON (L)
37 NOREG GND → A19
38 C P ON (H)
40 EVF CTL → K13
41 REG 4.8V
42 BAT (H)

TO MECHA. FP6001
1 ———
2 T REEL → K14
3 T REEL LED
4 NOREG GND
5 S REEL → K15
6 S REEL LED
7 SNS LED
8 POS3 → A21
9 POS2 → A22
10 POS1 → A23
11 COM → K16
12 LOAD R
13 LOAD R
14 LOAD F
15 LOAD F
16 S PHOTO(+)
17 S PHOTO(-) → A24
18 S TAB
19 CAS DOWN → K17
20 GND
21 ———

R6001 150
R6095 150

A25 A26

R6029 30K

D6016 MA133

QR6013 RN2110FTPH3 (P ON (L) :ON)
QR6007 RN1102FTPH3 (INV.) → A27

R6059 47K
R6046 1M
C6011 1000P
R6058 18K
C6027 1
R6061 1M
C6028 1000P
→ A28
→ A29

R6007 470K
R6006 470K
R6023 470K
R6004 470K
R6021 470K
R6022 470K

Q6004 2SC4738FYTH3 (INV.)

Q6006 2SC4944YR (INV.)

→ A30
→ A31
→ A32

R6132 1K
R6133 1K
→ A33
→ A34

QR6050 RN1704R (S TAB (H):ON)

R6040 150
R6039 150
(SIS LED DRIVE)
QR6003 RN2911R (EFFECT LED DRIVE)

R6009 100
R6005 82
(CAM LED DRIVE)
QR6004 RN2911R (AUTO LED DRIVE)

→ K25
→ K26
→ K27
→ K28

R6033 82
QR6001 RN1110FTPH3 (VCR LED DRIVE)

LB6002 VLP0153

→ K29

CL6102
QR6005 RN2103FTPH3 (SNS LED DRIVE)

R6041 12
Q6003 2SC4738FYTH3 (SNS LED DRIVE)
R6042 22K

R6038 100K

IC6009 S80825ANNP (RESET)

IC6008 AK6480AM-E2 (EEP ROM)
VDD R/B RESET GND
CS CK SI SO

C6038 6.3V47
C6039 0.01
C6021 0.01

R6032 4700
R6060 2200

CL6017
CL6003
CL6002
CL6001

→ K30
→ K31
→ K32
→ K33
→ A35
→ A36

QR6009 RN1113FTPH3 (INV.)

IC6011 XC62FP3002MR (REG 3V)
IN GND OUT
C6051 0.01

IC6010 XC62FP5002PR (REG 5V)
GND IN OUT
C6015 0.01

LB6003 VLP0153

C6014 16V47

R6043 68K

C6002 0.1
X6002 VSX0601
CL6022
C6022 0.1

IC6002 RS5C426M-E2 (RTC/REG/RESET)
VMB VRG2 VSB OSCIN OSCOUT CIN /VR2EN /CHGEN
/VDRG1 CIN OSCIN OSCOUT VSB VSS /CHGEN
VOLTAGE DETECTOR1
REAL TIME CLOCK
BATTERY VOLTAGE MONITOR
BATTERY CONTROL
VRG1
VR2 CONTROL
SERIES REGULATOR
LEVEL SHIFTER
SERIES REGULATOR2
VOLTAGE DETECTOR2
VMB CE SCLK SIO /INTR VRG2 /VR2EN
VRG1 /INTR CE SIO SCLK /VDRG NC VSS

C6001 0.01

→ K34
→ K35

→ K18
→ K19
→ K20
→ K21
→ K22
→ K23
→ K24

:CAPSTAN SERVO SPEED LOOP :CAPSTAN SERVO PHASE LOOP :CYLINDER SERVO SPEED LOOP :CYLINDER SERVO PHASE LOOP

IC6003
MN103004KD
(SYSTEM CONTROL &
SERVO MICROPROCESSOR)

Q6002
2SA1832FYTH3
(BUFFER)

Q6001
2SC3295AL
(AMP)

QR6014
RN1110FTPH3
(INV.)

TO VIDEO/ Page:32
TO POWER/ Page:38
TO CAMERA2/ Page:28
TO CAMERA1/ Page:27
TO LENS DRIVE/ Page:30
TO SUB SERVO/ Page:37
TO AUDIO/ Page:31

Ref No.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	2.6	3.0	0.2	2.6	2.6	3.0	-	0	3.0	0	4.9	0.5	0.4	-	3.1	5.0				
PLAY	2.6	3.0	0.2	2.6	2.6	3.0	-	0	3.0	0	4.9	0.5	0.4	-	3.1	5.0				
REC.	2.6	3.0	0.2	2.6	2.6	3.0	-	0	3.0	0	4.9	0.5	0.4	-	3.1	5.0				
F.F.	2.6	3.0	0.2	2.6	2.6	3.0	-	0	3.0	0	4.9	0.5	0.4	-	3.1	5.0				
REW	2.6	3.0	0.2	2.6	2.6	3.0	-	0	3.0	0	4.9	0.5	0.4	-	3.1	5.0				

Ref No.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.0	0.0	0.0	3.0	3.0	0.0	0.0	2.9	0.0	3.0	0.0	0.0	3.0	0.1	3.0	2.6	3.0	2.9	0.0	3.0
PLAY	3.0	0.0	0.0	3.0	3.0	0.0	3.0	2.9	0.0	3.0	0.0	3.0	3.0	0.1	3.0	1.4	3.0	2.9	0.0	3.0
REC.	3.0	0.0	0.0	3.0	3.0	0.0	0.0	2.9	0.0	3.0	0.0	3.0	3.0	2.7	3.0	1.4	3.0	2.9	0.0	3.0
F.F.	3.0	0.0	0.0	3.0	0.0	0.0	0.0	2.9	0.0	3.0	0.0	3.0	3.0	1.4	3.0	1.4	3.0	2.9	0.0	3.0
REW	3.0	0.0	0.0	3.0	0.0	0.0	0.0	2.9	0.0	3.0	3.0	3.0	3.0	1.4	3.0	1.4	3.0	2.9	0.0	3.0

Ref No.	IC6003																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.0	3.0	3.0	3.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0
PLAY	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.0	3.0	3.0	3.0	0.5	0.2	0.3	0.3	0.2	0.3	0.2	0.4	0.0
REC.	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.0	3.0	3.0	3.0	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0
F.F.	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.0	3.0	3.0	3.0	0.6	0.2	0.6	0.3	0.2	0.6	0.5	0.4	0.0
REW	0.0	0.0	0.0	0.5	0.0	0.0	0.0	3.0	3.0	3.0	3.0	0.6	0.5	0.6	0.3	0.5	0.6	0.5	0.6	0.0

Ref No.	IC6003																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	3.0	3.0	3.0	3.0	2.9	0.0	3.0	0.0	0.0	0.0	2.9	3.0
PLAY	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.4	3.0	0.0	3.0	3.0	2.9	0.0	3.0	0.0	0.0	0.0	2.9	3.0
REC.	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	3.0	3.0	3.0	3.0	2.9	0.0	3.0	0.0	0.0	0.0	2.9	3.0
F.F.	0.6	0.3	0.4	0.6	0.4	0.6	0.5	0.6	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	2.9	3.0
REW	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.7	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	0.0	2.9	3.0

Ref No.	IC6003																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0.0	0.0	3.0	0.0	1.4	1.5	3.0	1.4	0.0	2.9	0.0	3.0	2.6	0.0	3.0	3.0	3.0	0.0	0.0	3.0
PLAY	0.0	0.0	3.0	0.0	1.4	1.5	3.0	1.4	0.0	2.9	0.0	3.0	2.6	0.0	3.0	3.0	0.0	3.0	0.0	3.0
REC.	0.0	0.0	3.0	0.0	1.4	1.5	3.0	1.4	0.0	2.9	0.0	0.0	2.6	0.0	3.0	3.0	3.0	0.0	0.0	3.0
F.F.	0.0	0.0	3.0	0.0	1.4	1.4	3.0	1.4	0.0	2.9	0.0	3.0	2.6	3.0	2.9	3.0	3.0	0.0	0.0	3.0
REW	0.0	0.0	3.0	0.0	1.4	1.4	3.0	1.4	0.0	2.9	0.0	3.0	2.6	3.0	2.9	3.0	3.0	0.0	0.0	3.0

Ref No.	IC6003																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	2.9	2.9	2.9	0.0	0.0	1.5	3.0	0.0	0.0	1.9
PLAY	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	2.9	2.9	2.9	0.0	0.0	1.5	3.0	0.0	0.0	1.9
REC.	0.0	3.0	0.0	0.0	3.0	3.0	3.0	3.0	0.0	3.0	2.9	2.9	2.9	0.0	0.0	1.5	3.0	0.0	0.0	1.9
F.F.	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	2.9	2.9	2.9	0.0	0.0	1.5	3.0	0.0	0.0	1.9
REW	0.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	3.0	2.9	2.9	2.9	0.0	0.0	1.5	3.0	0.0	0.0	1.9

Ref No.	IC6003																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0.0	0.0	1.6	1.7	1.9	3.0	0.0	3.0	3.0	0.0	3.0	0.0	2.9	0.1	0.0	0.1	0.0	3.0	0.0	2.9
PLAY	0.0	0.0	2.5	1.7	2.0	3.0	0.0	3.0	0.0	0.0	3.0	0.0	2.9	0.1	2.9	0.1	0.0	3.0	0.0	0.0
REC.	0.0	0.0	1.7	1.7	2.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	2.9	0.1	0.0	0.1	0.0	3.0	0.0	2.9
F.F.	0.0	0.0	1.6	1.7	2.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	2.9	0.1	2.9	0.1	0.0	3.0	0.0	0.0
REW	0.0	0.0	1.6	1.7	2.0	3.0	0.0	3.0	3.0	0.0	3.0	0.0	2.9	0.1	2.9	0.1	0.0	3.0	0.0	0.0

Ref No.	IC6003																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	2.6	3.0	3.0	3.0	0.0	0.0	2.9	0.1	2.8	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.1	3.0
PLAY	2.6	3.0	3.0	3.0	0.0	0.0	2.9	0.1	2.9	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.1	3.0
REC.	2.6	3.0	3.0	3.0	0.0	0.0	2.9	0.1	2.9	0.0	0.0	0.0	1.5	1.5	0.0	0.0	1.8	0.0	0.1	3.0
F.F.	2.6	3.0	3.0	3.0	0.0	0.0	2.9	0.1	2.9	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.1	3.0
REW	2.6	3.0	3.0	3.0	0.0	0.0	2.9	0.1	2.9	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.1	3.0

Ref No.	IC6003																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
STOP	0.0	0.0	2.3	0.2	-	0.0	0.0	0.0	0.0	0.0	3.0	2.9	0.0	0.2	0.1	2.6	0.5	0.5	1.5	0.0
PLAY	0.0	0.5	1.2	1.2	-	0.0	0.0	1.3	0.0	0.0	3.0	2.9	0.0	0.2	0.1	2.5	1.5	0.5	1.5	0.0
REC.	0.0	0.0	2.3	1.2	-	0.0	0.0	0.0	0.0	0.0	3.0	2.9	0.0	0.2	0.1	2.6	1.5	0.5	1.5	0.6
F.F.	0.0	0.0	0.0	1.1	-	0.0	0.0	0.0	0.0	0.0	3.0	2.9	0.0	0.2	0.1	2.6	1.5	0.5	1.5	1.6
REW	0.0	0.0	1.1	1.1	-	0.0	0.0	0.0	0.0	0.0	3.0	2.9	0.0	0.2	0.1	2.6	1.5	0.5	1.5	1.6

Ref No.	IC6003																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
STOP	0.0	0.0	2.8	0.0	0.1	2.9	0.0	2.6	1.5	3.0	3.0	0.0	2.6	1.5	0.0	3.0	3.0	0.0	0.0	0.0
PLAY	0.0	0.0	2.8	0.0	0.1	2.9	0.0	0.0	1.5	0.0	0.0	0.0	2.6	1.5	0.0	3.0	3.0	0.0	0.0	0.0
REC.	0.0	0.0	2.8	0.0	0.1	2.9	0.0	1.7	1.8	3.0	3.0	0.0	2.6	1.5	0.0	0.0	3.0	0.0	0.0	0.0
F.F.	0.0	0.0	2.9	0.0	0.1	2.9	0.0	1.6	1.5	3.0	3.0	0.0	2.5	1.5	0.0	1.3	3.0	0.0	0.0	0.0
REW	0.0	0.0	2.9	0.0	0.1	2.9	0.0	1.6	1.5	3.0	3.0	0.0	2.6	1.5	0.0	0.0	3.0	0.0	0.0	0.0

Ref No.	IC6003																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
STOP	0.0	3.0	0.0	0.0	2.9	3.0	3.0	3.0	0.0	0.0	2.9	3.0	0.0	2.9	3.0	2.9	1.0	3.0	2.6	2.9
PLAY	0.0	0.0	0.0	3.0	2.9	3.0	3.0	0.0	0.0	0.0	2.9	3.0	0.0	2.9	3.0	2.9	0.9	3.0	2.6	2.9
REC.	0.0	3.0	0.0	0.0	2.9	3.0	3.0	3.0	0.0	0.0	2.9	3.0	0.0	2.9	3.0	2.9	3.0	3.0	2.6	3.1
F.F.	0.0	0.0	0.0	3.0	2.9	3.0	3.0	3.0	0.0	0.0	2.9	3.0	0.0	2.9	3.0	2.9	3.0	3.0	2.6	3.1
REW	0.0	0.0	0.0	3.0	2.9	3.0	3.0	3.0	0.0	0.0	2.9	3.0	0.0	2.9	3.0	2.9	3.0	3.0	2.6	3.1

Ref No.	IC6003																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
STOP	3.0	3.0	3.0	2.9	0.0	0.0	3.0	3.0	3.0	3.0	2.8	3.0	2.9	2.7	0.0	0.0				
PLAY	3.0	3.0	3.0	2.9	0.0	0.0	3.0	3.0	3.0	3.0	2.8	3.0	2.9	2.7	0.0	0.0				
REC.	3.0	3.0	3.0	2.9	0.0	0.0	3.0	3.0	3.0	3.0	2.9	3.0	2.9	2.7	0.0	0.0				
F.F.	3.0	3.0	3.0	2.9	0.0	0.0	3.0	3.0	3.0	3.0	2.8	3.0	2.9	2.7	0.0	0.0				
REW	3.0	3.0	3.0	2.9	0.0	0.0	3.0	3.0	3.0	3.0	2.8	3.0	2.9	2.7	0.0	0.0				

Ref No.	IC6008																			
MODE	1	2	3	4	5	6	7	8												
STOP	3.0	2.0	2.9	2.9	0.0	0.0	2.9	2.9												
PLAY	3.0	2.0	2.9	2.9	0.0	0.0	2.9	2.9												
REC.	3.0	2.0	2.9	2.9	0.0	0.0	2.9	2.9												
F.F.	3.0	2.0	2.9	2.9	0.0	0.0	2.9	2.9												
REW	3.0	2.0	2.9	2.9	0.0	0.0	2.9	2.9												

Ref No.	IC6009										IC6010									
MODE	1	2	3	4							1	2	3							
STOP	3.0	3.0	-	0.0							0.0	6.9	5.0							
PLAY	3.0	3.0	-	0.0							0.0	6.9	5.0							
REC.	3.0	3.0	-	0.0							0.0	6.9	5.0							
F.F.	3.0	3.0	-	0.0							0.0	6.9	5.0							
REW	3.0	3.0	-	0.0							0.0	6.9	5.0							

Ref No.	IC6011																			
MODE	1	2	3																	
STOP	0.0	3.0	5.0																	
PLAY	0.0	3.0	5.0																	
REC.	0.0	3.0	5.0																	
F.F.	0.0	3.0	5.0																	
REW	0.0	3.0	5.0																	

Ref No.	Q6001			Q6002			Q6003			Q6004			Q6006							
MODE	E	C	B	E	C	B	E	C	B	E	C	B	1	2	3	4	5			
STOP	0.0	4.8	-0.3	0.0	0.0	0.0	0.1	6.9	0.0	0	0	0.5	0.5	0	0	2.9	0			
PLAY	0.0	4.8	-0.3	3.0	3.0	2.4	0.1	6.8	0.0	0	0	0.5	0	0	0.5	0	2.9			
REC.	0.0	4.8	-0.3	3.0	3.0	2.4	0.1	6.8	0.0	0	0	0.5	0.5	0	0	2.9	0			
F.F.	0.0	4.8	-0.3	3.0	3.0	2.4	0.2	6.8	0.1	0	0	0.5	0	0	0.5	0	2.9			
REW	0.0	4.8	-0.3	3.0	3.0	2.4	0.2	6.8	0.1	0	0	0.5	0	0	0.5	0	2.9			

Ref No.	QR6001			QR6003						QR6004						QR6005				
MODE	E	C	B	1	2	3	4	5		1	2	3	4	5		E	C	B		
STOP	-1.2	0.0	0.0	0.0	0.0	0.0	2.2	2.2		3.0	0.0	3.0	0.1	0.1		2.9	0.0	3.0		
PLAY	-	0.0	3.0	0.0	0.0	0.0	2.0	2.0		0.0	0.0	3.0	0.1	1.9		2.9	0.0	3.0		
REC.	-0.9	0.0	0.0	0.0	0.0	0.0	2.2	2.2		3.0	0.0	3.0	0.1	0.1		2.9	0.0	3.0		
F.F.	-	0.0	3.0	0.0	0.0	0.0	2.2	2.2		0.0	0.0	0.0	2.4	2.6		2.9	0.1	2.9		
REW	-	0.0	3.0	0.0	0.0	0.0	2.2	2.2		0.0	0.0	0.0	2.4	2.6		2.9	0.1	2.9		

Ref No.	QR6007			QR6009			QR6012			QR6013			QR6014							
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B					
STOP	0.0	0.0	3.0	0.0	3.0	0.0	7.1	7.1	0.0	3.0	3.0	0.0	0.0	6.2	0.0					
PLAY	0.0	0.0	3.0	0.0	3.0	0.0	7.1	7.1	0.0	3.0	3.0	0.0	0.0	6.5	0.0					
REC.	0.0	0.0	3.0	0.0	3.0	0.0	7.1	7.1	0.0	3.0	3.0	0.0	0.0	6.5	0.0					
F.F.	0.0	0.0	3.0	0.0	3.0	0.0	7.1	7.1	0.0	3.0	3.0	0.0	0.0	6.3	0.0					
REW	0.0	0.0	3.0	0.0	3.0	0.0	7.1	7.1	0.0	3.0	3.0	0.0	0.0	6.3	0.0					

Ref No.	QR6050																			
MODE	1	2	3	4	5															
STOP	0.0	0.0	0.0	0.1	0.0															
PLAY	0.0	0.0	0.0	0.1	0.0															
REC.	0.0	0.0	0.0	2.8	3.0															
F.F.	0.0	0.0	0.0	0.1	0.0															
REW	0.0	0.0	0.0	0.1	0.0															

:VIDEO MAIN SIGNAL PATH IN REC MODE

:VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

FROM POWER — ST 4.8V

FROM CAMERA — REC C CTL

FROM CAMERA — REC Y CTL

TO CAMERA — VTR SYNC

FROM CAMERA — CAMERA Y IN

TO EVF — VIDEO OUT

FROM IC6001 — ART

FROM CAMERA — 4.43MHz

FROM SYSTEM CTL — VIDEO HEAD CTL

FROM SYSTEM CTL — D REC Ⓗ

QR3308

QR3309

QR3311

QR3310

LP Ⓗ

EE Ⓗ

FROM IC6001

Q5003

ROTARY ERASE DRIVE

FP5001 1 — FE

FP5001 2

IC5001 (REC/PLAY HEAD AMP)

RE ON Ⓗ — FROM SYSTEM CTL

C3305,C3306 L3303

TRAP

SP/LP

EE/ VV/ TRICK

IC3302

FILTER

YNR

HSS

GCA

CCD LPF

DOC

HPF

LIM

DET

NC

ATT

AMP

MUTE

Y/C MIX

CLP

P.B:Y REC:Y+C

AGC

Y+C

C

EE

VV

Y

HPF

LIM

NIL NLDE

MAIN LPF

SUB LPF

FM DEM

LIM

ENV DET

AGC DET

RF AGC

Y G.CTL

MIX

C G.CTL

AGC

HEAD AMP

H.A.SW

H.SW

FE CTL

CT.SW

Q5001 (HEAD SW)

FP5001 5 — HEAD R1

FP5001 4

FP5001 10 — HEAD R2

FP5001 9

FP5001 6 — HEAD L1

FP5001 7

FP5001 11 — HEAD L2

FP5001 12

Q5002 (HEAD SW)

MAIN EMPH

FM MOD

W/D CLIP

FO DET

BPF

NTSC PAL

COMB AMP

4.43 BPF

BURST UP

629KHz LPF

BURST DOWN

MAIN BM

CCD BPF

MESECAM

PAL

ACC

ACC DET

ID

KILLER

X2

VCO

1/4

1/4

SUB BM

1/40

F.DET

PHASE ROTATION

VXO

AFC

AFC

SIDE LOCK

FH

SP

LP

LOGIC

H.SW

HA.SW

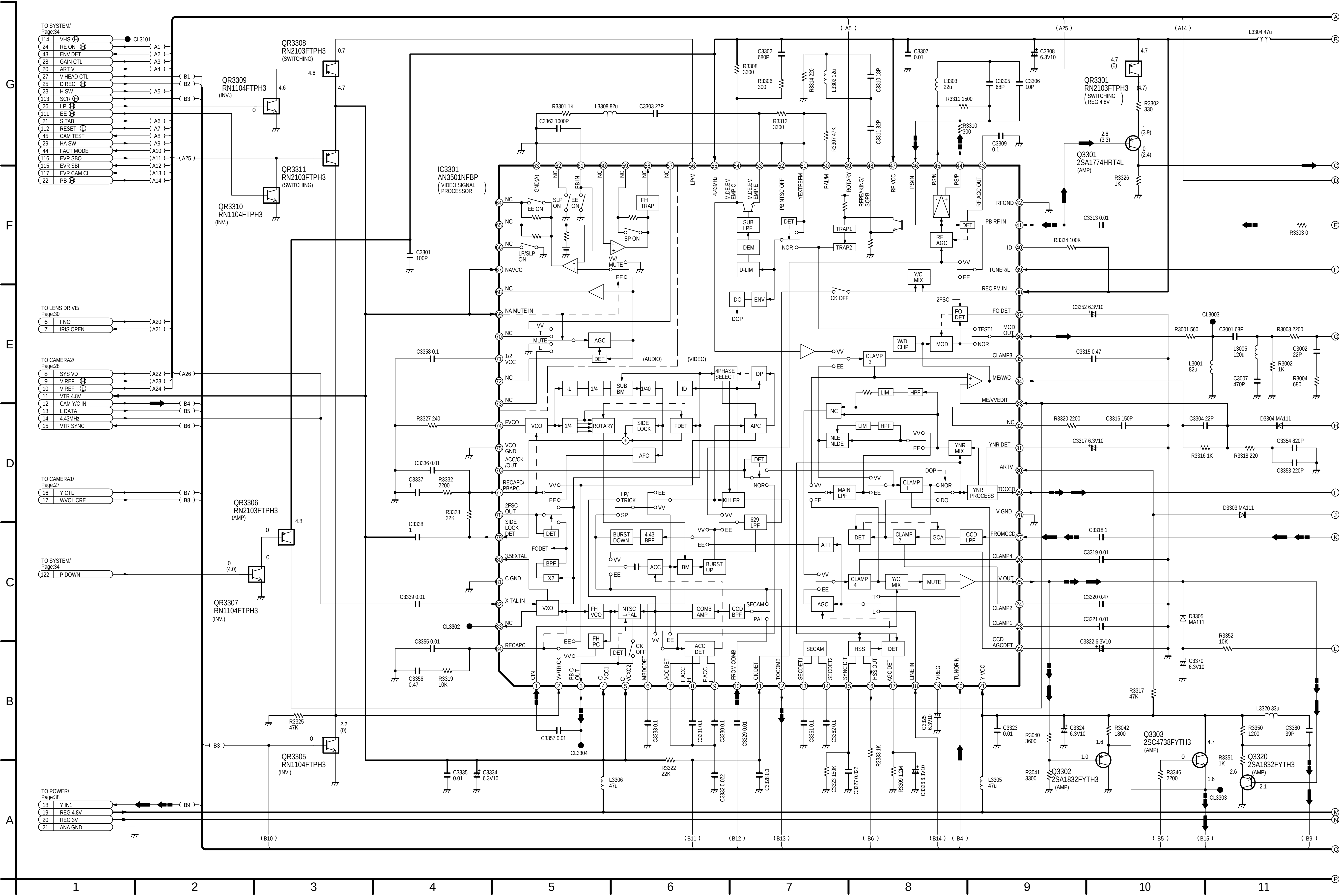
CT.SW1

CT.SW2

CT.SW3

CT.SW4

H SW — FROM IC6001



TO SYSTEM/
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114 VHS (H)
24 RE ON (H)
43 ENV DET
28 GAIN CTL
20 ART V
27 V HEAD CTL
25 D REC (H)
23 H SW
113 SCR (H)
26 LP (H)
111 EE (H)
21 S TAB
112 RESET (L)
45 CAM TEST
29 HA SW
44 FACT MODE
116 EVR SBO
115 EVR SBI
117 EVR CAM CL
22 PB (H)
CL3101
TO LENS DRIVE/
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6 FNO
7 IRIS OPEN
TO CAMERA2/
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8 SYS VD
9 V REF (H)
10 V REF (L)
11 VTR 4.8V
12 CAM Y/C IN
13 L DATA
14 4.43MHz
15 VTR SYNC
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16 Y CTL
17 WVOL CRE
TO SYSTEM/
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122 P DOWN
TO POWER/
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18 Y IN1
19 REG 4.8V
20 REG 3V
21 ANA GND
QR3308
RN2103FTPH3
(SWITCHING)
QR3309
RN1104FTPH3
(INV.)
QR3311
RN2103FTPH3
(SWITCHING)
QR3310
RN1104FTPH3
(INV.)
QR3306
RN2103FTPH3
(AMP)
QR3307
RN1104FTPH3
(INV.)
QR3305
RN1104FTPH3
(INV.)
IC3301
AN3501NFBP
(VIDEO SIGNAL PROCESSOR)
C3301 100P
C3358 0.1
R3327 240
C3336 0.01
C3337 1
R3332 2200
R3328 22K
C3338 1
C3339 0.01
CL3302
C3355 0.01
C3356 0.47
R3319 10K
R3325 47K
C3335 0.01
C3334 6.3V10
C3357 0.01
CL3304
L3306 47u
R3322 22K
C3333 0.1
C3331 0.1
C3330 0.1
C3332 0.022
C3329 0.01
C3328 0.1
C3361 0.1
C3362 0.1
C3323 150K
C3327 0.022
R3333 1K
R3309 1.2M
C3326 6.3V10
C3325 6.3V10
R3301 1K
L3308 82u
C3303 27P
C3363 1000P
R3308 3300
C3302 680P
R3306 300
R3314 220
L3302 12u
C3310 18P
C3311 82P
R3312 3300
R3307 47K
C3307 0.01
C3308 6.3V10
L3303 22u
C3305 68P
C3306 10P
R3311 1500
R3310 300
C3309 0.1
QR3301
RN2103FTPH3
(SWITCHING REG 4.8V)
R3302 330
Q3301
2SA1774HRT4L
(AMP)
R3326 1K
L3304 47u
C3313 0.01
R3303 0
R3334 100K
C3352 6.3V10
CL3003
R3001 560
C3001 68P
R3003 2200
L3001 82u
L3005 120u
C3007 470P
R3002 1K
C3002 22P
R3004 680
C3315 0.47
R3320 2200
C3316 150P
C3304 22P
D3304 MA111
C3317 6.3V10
R3316 1K
R3318 220
C3354 820P
C3353 220P
D3303 MA111
C3318 1
C3319 0.01
C3320 0.47
D3305 MA111
C3321 0.01
C3322 6.3V10
R3352 10K
C3370 6.3V10
R3317 47K
L3320 33u
C3323 0.01
C3324 6.3V10
R3042 1800
R3040 3600
R3041 3300
Q3302
2SA1832FYTH3
(AMP)
Q3303
2SC4738FYTH3
(AMP)
R3346 2200
CL3303
R3350 1200
C3380 39P
R3351 1K
Q3320
2SA1832FYTH3
(AMP)
L3305 47u
63 GND(A)
62 NC
61 PB IN
60 NC
59 NC
58 NC
57 NC
56 LP/M
55 4.43MHz
54 M.DE.EM. EMP.C
53 M.DE.EM. EMP.E
52 PB NTSC OFF
51 YEXTPBFM
50 PAL/M
49 ROTARY
48 RFPEAKING/ SQPB
47 RF VCC
46 PS/IN
45 PS/N
44 PS/P
43 RF AGC OUT
42 RFGND
41 PB RF IN
40 ID
39 TUNER/L
38 REC FM IN
37 FO DET
36 MOD OUT
35 CLAMP3
34 ME/W/C
33 ME/VVEDIT
32 NC
31 YNR DET
30 ARTV
29 TOCCD
28 V GND
27 FROMCCD
26 CLAMP4
25 V OUT
24 CLAMP2
23 CLAMP1
22 CCD AGCDET
64 NC
65 NC
66 NC
67 NAVCC
68 NC
69 NA MUTE IN
70 NC
71 1/2 VCC
72 NC
73 NC
74 FVCO
75 VCO GND
76 ACC/CK /OUT
77 RECAFC/ PBAPC
78 2FSC OUT
79 SIDE LOCK DET
80 3.58XTAL
81 C GND
82 X TAL IN
83 NC
84 RECAPC
1 CIN
2 VV/TRICK
3 PB C OUT
4 C VCC1
5 C VCXC2
6 MBDCDET
7 ACC DET
8 F ACC H
9 F ACC L
10 FROM COMB
11 CK DET
12 TOCOMB
13 SECDET1
14 SECDET2
15 SYNC DIT
16 HSS OUT
17 AGC DET
18 LINE IN
19 VREG
20 TUNORIN
21 Y VCC
EE ON
SLP ON
EE ON
SP ON
FH TRAP
LP/SLP ON
VV/ MUTE
EE
VV
T
MUTE
L
AGC
DET
(AUDIO)
(VIDEO)
SUB LPF
DEM
D-LIM
DO
DOP
ENV
DET
NOR
TRAP1
TRAP2
CK OFF
RF AGC
DET
Y/C MIX
2FSC
FO DET
TEST1
W/D CLIP
MOD
NOR
CLAMP 3
4PHASE SELECT
DP
-1
1/4
SUB BM
1/40
ID
VCO
1/4
ROTARY
SIDE LOCK
FDET
APC
AFC
NC
LIM
HPF
NLE NLDE
YNR MIX
DOP
CLAMP 1
MAIN LPF
YNR PROCESS
DO
DET
NOR
LP/ TRICK
SP
KILLER
629 LPF
BURST DOWN
4.43 BPF
DET
FODET
BPF
X2
ACC
BM
BURST UP
ATT
DET
CLAMP 2
GCA
CCD LPF
CLAMP 4
Y/C MIX
MUTE
AGC
VXO
FH VCO
NTSC →PAL
COMB AMP
CCD BPF
SECAM
PAL
T
L
FH PC
DET
CK OFF
ACC DET
SECAM
HSS
DET
(A5)
(A25)
(A14)
A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A20 A21 A22 A23 A24 A25 A26
B1 B2 B3 B4 B5 B6 B7 B8 B9
(B10) (B11) (B12) (B13) (B6) (B14) (B4) (B5) (B15) (B9)
A B C D E F G H I J K L M N O P
1 2 3 4 5 6 7 8 9 10 11
G F E D C B A

:AUDIO MAIN SIGNAL PATH IN REC MODE :AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE :VIDEO MAIN SIGNAL PATH IN REC MODE :VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

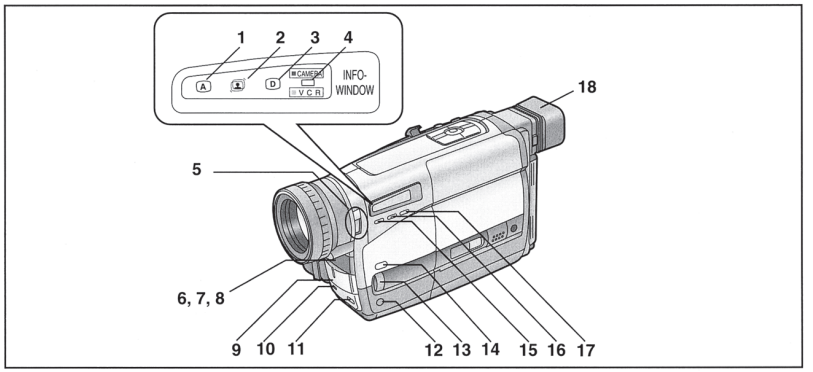
Q3001 2SB1219 (SWITCHING REG 4.8V)
QR3002 RN1103FTPH3 (INV.)
IC3302 TL8850AF (FILTER)
Q5003 2SA812 (ROTARY ERASE DRIVE)
IC5001 AN3355FHP (REC/PLAY HEAD AMP)
Q5001 HN1C03FBR (HEAD SW)
Q5002 HN1C03FBR (HEAD SW)

TO POWER/ Page:38: EVF ADJ 22, ST 4.8V 23
TO AVS OUT/ Page:37: V OUT 24, V IC OUT 25
TO AUDIO/ Page:31: CTL OUT 26, A OUT 27, MIC IN 28
TO EVR PP3001: 1 TL5002, 2 TL5002, 3 GND, 4 V ENV, 5 MIC IN, 6 ANA Y OUT, 7 A OUT, 8 FACT MODE, 9 CTL OUT, 10, 11, 12, 13 IRIS OPEN, 14 FNO, 15 POL, 16 V REF (H), 17, 18 VD, 19 CAM CLK, 20 CK DET, 21, 22 SBI, 23 SBO, 24 GND, 25 V REF (L), 26 POL, 27 RESET (L), 28, 29 REG 5V, 30, 31 CAM TEST, 32 HA SW, 33 V OUT, 34 S TAB, 35 EVF ADJ, 36 LINE (H), 37 LINE IN, 38 GND, 39 TL5001, 40 TL5001
TO CYLINDER UINT FP5001: 1 RE(F), 2 RE(S), 3 GND, 4 R1(F), 5 R1(S), 6 L1(F), 7 L1(S), 8 GND, 9 R2(F), 10 R2(S), 11 L2(F), 12 L2(S), 13 GND
TO FRAME GND

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRAKETS ( ) ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.



Controls and Components

1 Auto Mode Indication Lamp [Ⓐ] (➜ 56)

2 Super Image Stabilizer Indication Lamp [🤳] (➜ 80, 86)

3 Digital Effect Indication Lamp [Ⓓ] (➜ 80, 88, 90)

4 Camera Mode Lamp [CAMERA] (➜ 56)
VCR Mode Lamp [VCR] (➜ 66, 68)
Camera Mode: The lamp lights red.
VCR Mode: The lamp lights green.

5 0-Lux Recording Switch [0 LUX OFF/ON] (➜ 96)

6 White Balance Sensor (➜ 144)

7 Remote Control Sensor (➜ 114)
(Only on model NV-RZ2EG)

8 Built-in Infra red Beam Emitters (➜ 96)

9 Microphone

10 Tally Lamp (➜ 58)

11 Fade Button [FADE] (➜ 78, 90)

12 Focus Button [FOCUS] (➜ 106)
Item Set Button [SET] (➜ 28)
Tracking Button (➜ 72)

13 Multi-Function Dial [▲▼/MF/TRACKING] (➜ 28, 72, 106)

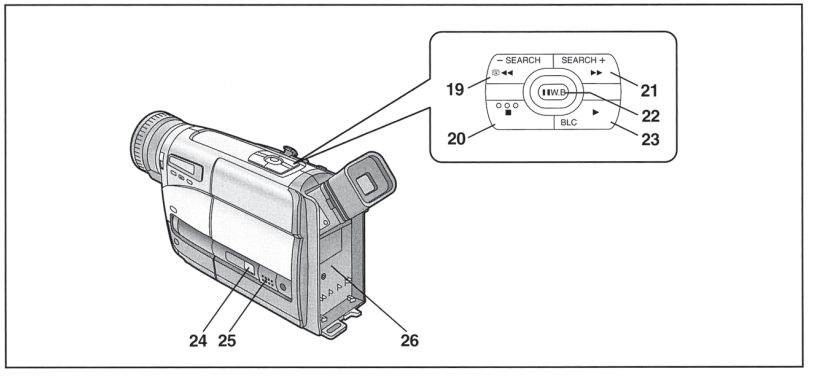
14 Menu Button [MENU] (➜ 28)

15 Auto Exposure Selector Button [PROG. AE] (➜ 56, 102, 106, 108)

16 Digital Image Store Button [STORE] (➜ 124)
Digital Image Superimpose Button [OFF/ON] (➜ 124, 126, 128)

17 Colour Selector Button for Digital Image [COLOUR] (➜ 126)

18 Eyecup



19 Reverse Search Button [–SEARCH] (➜ 60)
Rewind/Review/High-Speed Rewind Button [◀◀] (➜ 66, 72, 74)
Recording Check Button [⟲] (➜ 60)

20 Stop Button [■] (➜ 66)

21 Forward Search Button [SEARCH+] (➜ 60)
Fast Forward/Cue Button [▶▶] (➜ 74)

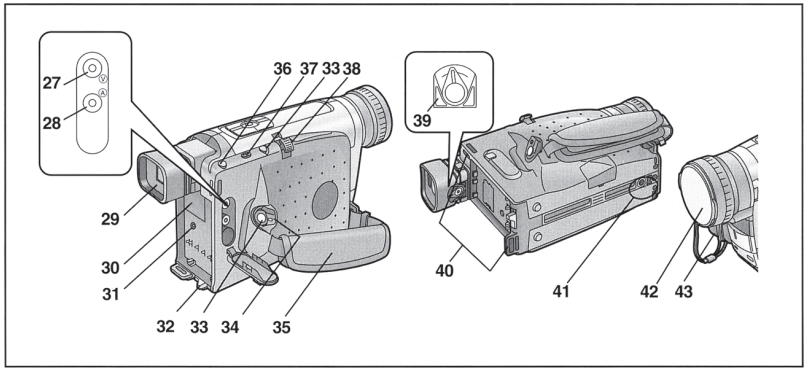
22 White Balance Button [W.B] (➜ 102)
Pause Button [❚❚] (➜ 74)

23 Playback Button [▶] (➜ 66)
Backlight Button [BLC] (➜ 112)

24 Cassette Compartment Window (➜ 40)

25 Cassette Compartment Lock Button [LOCK] (➜ 40)

26 Battery Holder (➜ 24)



27 Video Output Socket [Ⓥ] (➜ 68, 136)

28 Audio Output Socket [Ⓐ] (➜ 68, 136)

29 Finder (➜ 46, 76)

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Finder screen, the whole screen may have a slight colour cast, and flickering may occur. However, this is not a malfunction and does not affect the recorded picture.

30 Cover of the Button-type Battery's Compartment [BACKUP BATTERY] (➜ 50)

31 DC Input Socket [DC IN] (➜ 18)

32 Battery Eject Lever [◁BATTERY EJECT] (➜ 24)

33 Recording Start/Stop Buttons (➜ 54, 56)
Use either of these buttons depending on the recording angle.

34 Off/On Mode Selector Switch [CAMERA/OFF/VCR] (➜ 24, 56, 66, 76)

35 Grip Belt (➜ 46)

36 Cassette Eject Button [⏏ EJECT] (➜ 40)

37 Date/Time/Title Button [DATE/TITLE] (➜ 54, 122)

38 Zoom Lever [W/T] (➜ 62, 88)

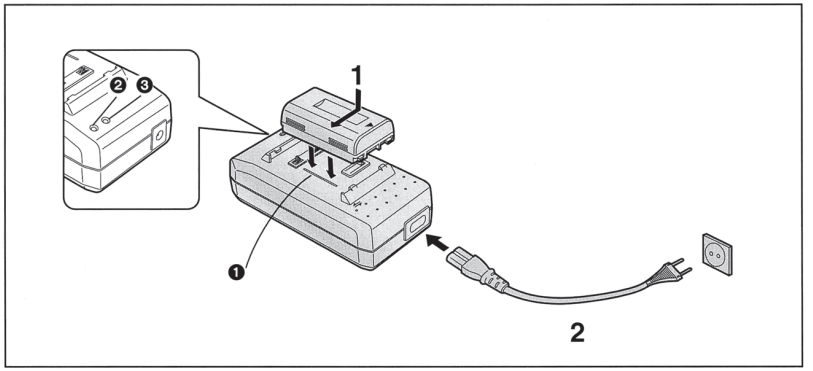
39 Eyepiece Corrector Lever (➜ 46)

40 Shoulder Strap Holders (➜ 48)

41 Tripod Receptacle

42 Lens Cap (➜ 46, 102)

43 Lens Cap Holder (➜ 46)



Charging the Battery

Charge the Battery before using it.

1 Attach the Battery.

- Align the Battery with line ❶ and push it in the direction of the arrow while holding it down.

2 Securely connect the AC Mains Lead to the AC Adaptor and an AC Mains Socket.

- The [POWER] Lamp ❷ lights and then the [CHARGE] Lamp ❸ flashes and charging starts.
- If the [CHARGE] Lamp ❸ does not flash even though the Battery is attached, remove the Battery and then re-attach it.

■ Charging Lamp [CHARGE]

Flashing:	During charging
Lit:	The Battery can already be used to operate the Movie Camera but it is not yet fully charged. (Approx. 30-minute battery charge)
Off:	The Battery is fully charged.

■ Removing the Battery

Slide it in the opposite direction of that indicated in step 1 above.

- Charge the Battery at a room temperature between 10°C and 30°C.
- When charging, do not connect the DC Input Lead to the AC Adaptor.
- During recording or charging, the Battery becomes warm. However, this is normal.
- If you charge the Battery when it is not yet discharged, the [CHARGE] Lamp ❸ may flash briefly and then go out. This indicates that the Battery is fully charged. Therefore, this is not an indication of a malfunction.

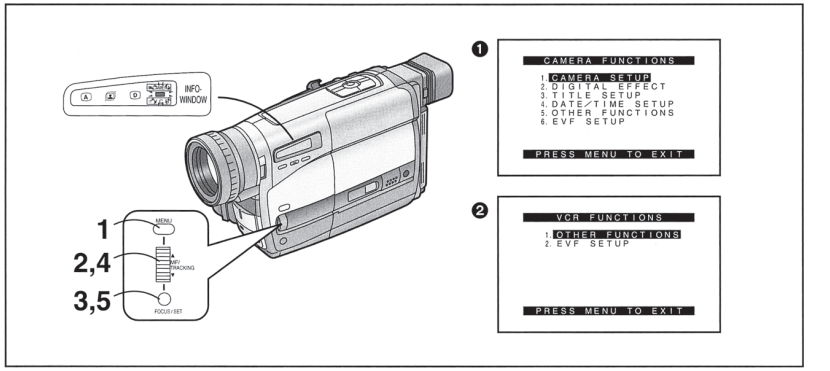
■ Charging Time and Maximum Continuous Recording Time in the Manual Recording Mode

Battery Model No.	Charging Time for a Full Charge	Max. Continuous Recording Time
CGR-V610 (supplied)	80 min.	120 min.
CGR-V620	145 min.	240 min.
CGR-V816	310 min.	480 min.

Battery Model No.	Approx. 30-Minute Charge	Max. Continuous Recording Time
CGR-V610 (supplied)	30 min.	50 min.
CGR-V620		
CGR-V816		

(The times shown in the above charts are approximations.)

Maximum Continuous Recording Time means the duration of continuous recording performed at an ambient temperature of 25°C and 60% relative humidity. In actual recording, however, the use of the zoom and other functions increases the power consumption, and higher or lower temperatures reduce the Battery's ability to generate electricity. Therefore, the actual recording time per Battery may be approximately 30%–50% shorter than listed above.



Using the Menus

This Movie Camera displays the settings of various functions in menus to make it easy to select the desired functions and settings.

1 Press the [MENU] Button.

When you press this button while the [CAMERA] Lamp is lit in red, the Camera Mode Menu ❶ appears. When you press this button while the [VCR] Lamp is lit in green, the VCR Mode Menu ❷ appears.

2 Turn the [▲▼] Dial to select the desired sub-menu.

Turning the [▲▼] Dial changes the highlighted item.

3 Press the [SET] Button to display the selected sub-menu.

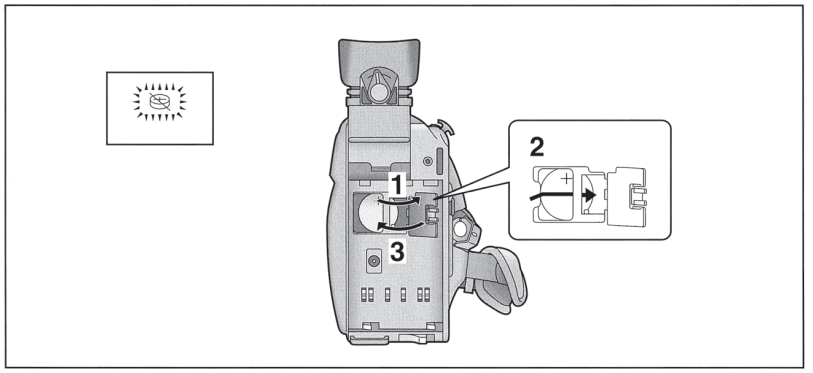
4 Turn the [▲▼] Dial to select the item to be set.

5 Press the [SET] Button to set the selected item to the desired mode.

Exiting the Menu

Press the [MENU] Button again.

- The method for making settings on the [DATE/TIME SETUP] Sub-Menu **(➜ 52)** and [EVF SETUP] Sub-Menu **(➜ 38)** differs slightly from that of other Sub-Menus.
- You can display the menu during playback, but not during recording. Also, it is possible to start playback while the menu is displayed, but if you start recording, the displayed menu disappears.
- The settings that you have selected on the menus are maintained when you turn the Movie Camera off. However, if you disconnect the power supply unit (Battery or AC Adaptor) from the Movie Camera before turning it off, the selected settings may not be maintained.



Inserting the Button-type Battery

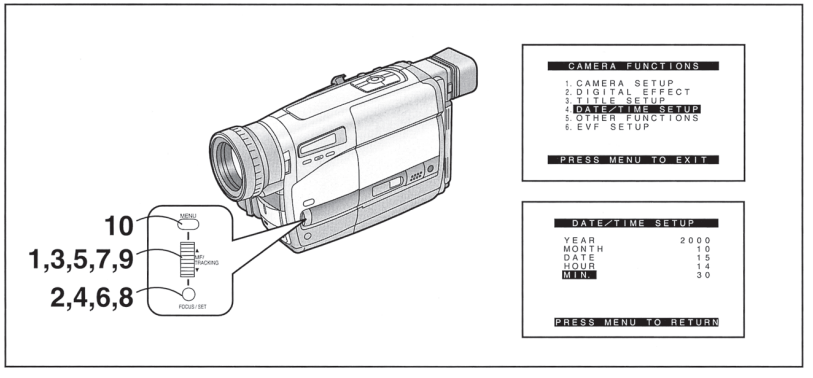
Before setting the date and time, insert the button-type battery (supplied).

1 Open the [BACKUP BATTERY] Cover.
2 Insert the button-type battery so that its (+) side is visible.
3 Close the [BACKUP BATTERY] Cover.

- To make it easier to remove the button-type battery, use a pointed object.
- When you remove the button-type battery, be careful not to drop it.
- **Keep the button-type battery out of the reach of children.**
- Make sure you insert the battery with its poles correctly aligned.
- The internal clock works even when the Movie Camera is turned off, and it consumes power from the button-type battery.

- Before inserting or removing the button-type battery, be sure to set the [CAMERA/OFF/VCR] Switch to [OFF].
- When the button-type battery is exhausted, the [ ] Indication flashes. In this case, replace it with a new CR2025 battery.
  (The life of the battery is about 3 years.)

CAUTION
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.



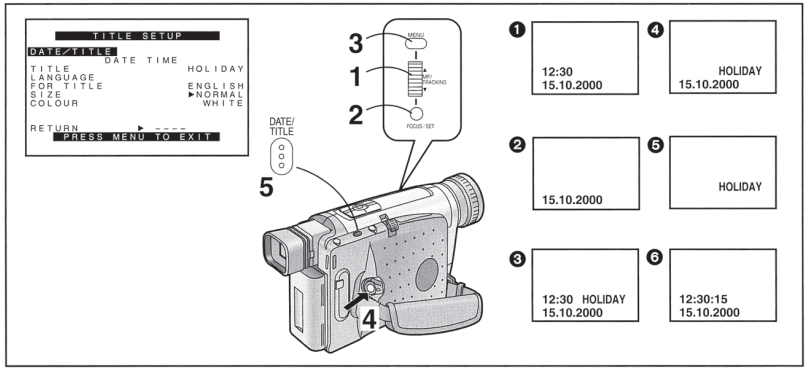
Setting the Date and Time

If you select the [DATE/TIME SETUP] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu, the menu shown above appears.
The initial setting of date and time is 0:00, 1st January, 2000.

For example: To set the clock to 15th October 2000, 14:30.

1 Turn the [▲▼] Dial to set to [2000].
The years change in the following order:
...1990...1991... 2000...2089...1990...
2 Press the [SET] Button to select [MONTH].
3 Turn the [▲▼] Dial to set to [10].
4 Press the [SET] Button to select [DATE].
5 Turn the [▲▼] Dial to set to [15].
6 Press the [SET] Button to select [HOUR].
7 Turn the [▲▼] Dial to set to [14].
8 Press the [SET] Button to select [MIN.].
9 Turn the [▲▼] Dial to set to [30].
10 Press the [MENU] Button to finish the date and time setting.
The operation of the clock starts from [00] seconds. Pressing the button one more time makes the menu disappear.

- If you select the [DATE/TIME SETUP] Sub-Menu when the button-type battery is not inserted into the Movie Camera or is exhausted, the Main-Menu disappears and the [ ] Indication flashes instead. Insert a new button-type battery **(➔ 50)** and then set the date and time again.
- As the Movie Camera's built-in clock is subject to slight imprecision, be sure to check the indicated time before recording.
- The clock employs the 24-hour system.



Recording with the Time and/or Date Superimposed in the Picture

After displaying the [TITLE SETUP] Sub-Menu... (➔ 28)

1 Turn the [▲▼] Dial to select [DATE/TITLE].
2 Press the [SET] Button to select the desired indication.
- The indications change in the order ❶ to ❻.
  ❶ Date and Time ⟶ ❷ Date ⟶
  ❸ Date, Time and Title ⟶ ❹ Date and Title ⟶
  ❺ Title ⟶ ❻ Date and Time with seconds ⟶
- If the button-type battery for the built-in clock is not inserted into the Movie Camera or is exhausted, only the title is displayed. **(➔ 50)**

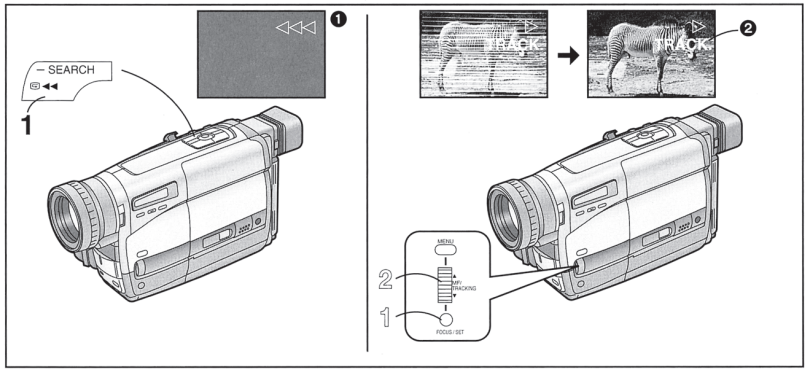
3 Press the [MENU] Button to exit the menu.
- The selected Date/Time/Title Indication appears.

4 Press the Recording Start/Stop Button to start recording.

■ **Deleting the Date/Time/Title Indication**

5 During recording or when the Movie Camera is in the Recording Pause Mode, press the [DATE/TITLE] Button to make the Date/Time/Title Indication disappear.

- After turning the Movie Camera off and then on again, the previously selected Date/Time/Title Indication is no longer displayed. To make it appear again, press the [DATE/TITLE] Button once.
- Be sure to turn the Movie Camera off before removing the Battery or disconnecting the AC Adaptor. Disconnecting the power supply while the Movie Camera is on erases the Date/Time/Title Indication **(➔ 118)** stored in memory.



High-Speed Rewinding

1 Press the [◀◀] Button for more than 1 second in the Stop Mode.

- The [◁◁◁] Indication ❶ appears.
- During High-Speed Rewinding, the tape winding sound is louder.
- When rewinding the tape to the beginning, the Movie Camera automatically changes over from the High-Speed Rewinding Mode to the Rewinding Mode near the beginning of the tape, and it switches over to the Stop Mode at the beginning of the tape.
- If you press the [■] Button during High-Speed Rewinding, it takes several seconds before the tape is stopped, in order to protect the tape from damage.
- When using the Remote Controller, press the [◀◀] Button for more than 3 seconds.
  (Only on model NV-RZ2EG)
- During High-Speed Rewinding, the Tape Counter shows [0:00.00].

Eliminating Picture Distortions (Manual Tracking Adjustment)

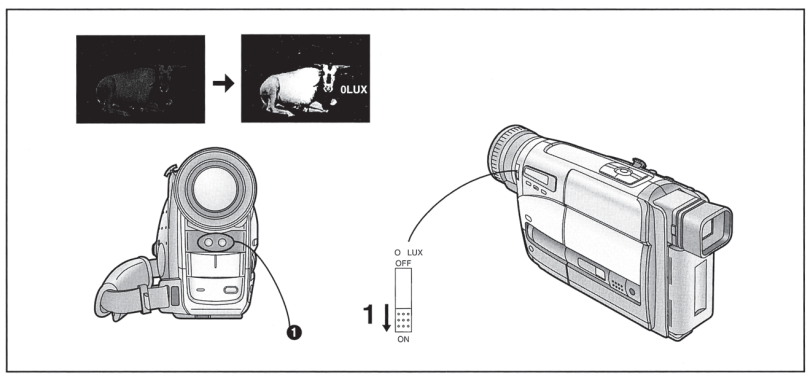
This Movie Camera adjusts the tracking automatically. With certain cassettes, however, the tracking adjustment may not be precise. In this case, adjust the tracking manually.

1 **Press the [FOCUS/SET] Button briefly during playback.**
- The [TRACK.] Indication ❷ appears.

2 **Turn the [TRACKING] Dial to adjust the tracking.**

- The Tracking Adjustment Function is automatically cancelled when the [TRACKING] Dial is not turned for 5 seconds.
- It may not be possible to remove the noise bars completely.
- It is not possible to adjust the tracking when a menu is displayed.
- If you eject the cassette after adjusting the tracking, the adjusted setting is cancelled.

Returning to the Auto Tracking Mode
Press [FOCUS/SET] Button for more than 2 seconds during playback.



Recording in Dark Places Without Any Illumination

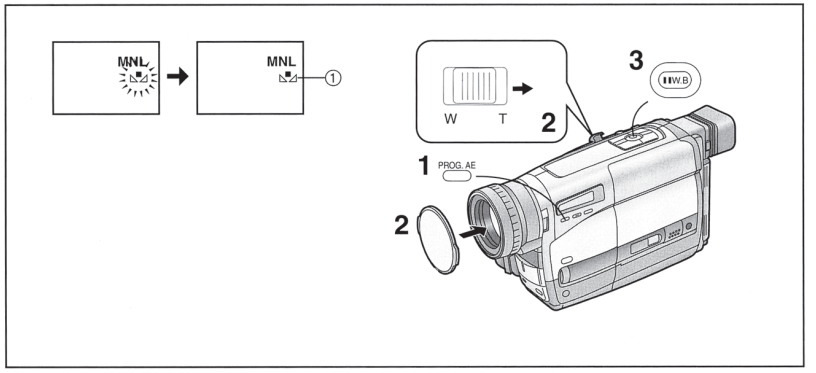
(0 Lux Night View Function)

This function is convenient when you want to record at night in places without any illumination, for example for observing the behaviour of nocturnal animals, etc. In this mode, the Movie Camera emits infrared rays which makes it possible to record subjects that are invisible to the naked eye.

1 Set the [0 LUX OFF/ON] Switch to [ON] to make the [0LUX] Indication appear.
- The built-in Infra-red Beam Emitters ❶ light. Be careful not to cover them with your hand when recording.

- Do not use the 0 Lux Night View Function in brightly lit places and never aim the Movie Camera against the sun, as this could cause irreparable damage.
- The playback picture of scenes recorded with the 0 Lux Night View Function will be in black and white.
- If you change the setting of the [0 LUX OFF/ON] Switch during recording, a switching noise is also recorded.
- When recording with the 0 Lux Night View Function, it is not possible to adjust the white balance manually or to cancel the manually adjusted white balance setting.
- It is not possible to use any of the Programme AE Modes when the 0 Lux Night View Mode is activated.
- When using the 0 Lux Night View Function, the subject should be within 3 metres from the Movie Camera.
- When the automatic focusing is not precise, adjust the focus manually.
- If you do not want the Tally Lamp to light during recording using the 0 Lux Night View Function, set [TALLY LAMP] on the [CAMERA SETUP] Sub-Menu to [OFF].
- As the iris is fully opened in the 0 Lux Night View Mode, subjects in white or other light colours may be recorded whitish, blurred and with weak contrast.

Cancelling the 0 Lux Night View Function
Set the [0 LUX OFF/ON] Switch to [OFF] to make the [0LUX] Indication disappear.



Recording with Manual White Balance Adjustment

With this Movie Camera, you can also adjust the white balance manually.
Use this mode for special subjects and recording conditions, such as listed **(➜ 100)**, for which the Full Auto Mode is not suitable, and for light sources outside the range ❶ **(➜ 104)**. Use it also when you want to manually adjust the white balance for each new scene as professionals do.

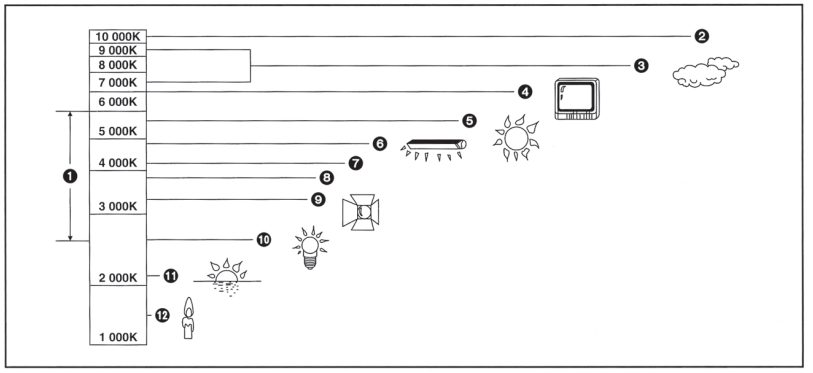
1 Press the [PROG. AE] Button repeatedly until an indication other than [AUTO] appears.

2 Attach the White Lens Cap and zoom in until the entire screen is white.

3 Aim the Movie Camera at the subject that you want to record and then keep the [W.B] Button pressed until the [▣] Indication ① stops flashing and remains lit.
- When the Sepia Mode, Black & White Mode or 0 Lux Night View Mode is used, it is not possible to manually adjust the white balance. Also, if the white balance was manually adjusted, it cannot be cancelled, even if you press the [W.B] Button.

In the following cases, the [▣] Indication flashes:
- During manual adjustment of the white balance. (If the surroundings are dark and the white balance cannot be adjusted, the [▣] Indication keeps flashing.)
- When the previously set white balance setting is maintained.
- When you are trying to adjust the white balance in the digital zoom range (21×– 220×). In this case, first adjust the white balance in the optical zoom range (1× – 20×) and then zoom back to within the Digital Zoom Mode.

Cancelling the Manual White Balance Mode
Press the [W.B] Button once. Or, press the [PROG. AE] Button repeatedly until the [AUTO] Indication appears.



Colour Temperature and White Balance Adjustment

Every light source has its own colour temperature measured in Kelvin (K). The higher the Kelvin value, the more bluish the light; the lower the value, the more reddish the light. The Kelvin value is related to the tint of the light, but not directly to its brightness.

The range ❶ indicated in the illustration above shows the light sources for which this Movie Camera can provide precise white balance adjustment and, therefore, natural colours in the recorded pictures, when using the Full Auto Mode. For light sources outside this range, adjust the white balance manually. **(➔ 102)** Also, additional lighting may be necessary.

❶ Control range of this Movie Camera's Auto White Balance Adjustment Mode
❷ Blue sky
❸ Cloudy sky (Rain)
❹ TV screen
❺ Sunlight
❻ White fluorescent lamp
❼ 2 hours after sunrise or before sunset
❽ 1 hour after sunrise or before sunset
❾ Halogen light bulb
❿ Incandescent light bulb
⓫ Sunrise or sunset
⓬ Candlelight

1. VW-AS7E	2. CGR-V610	3. CGR-V620	4. CGR-V816	5. VW-KBC7E	6. VW-LF43WE
7. VW-LT4314WE	8. VW-LW4307WE	9. VZ-CT55E	10. VW-TCA7E	11. VW-VT1E	12. VZ-LDR10E
13. VW-SK11E					

Optional Accessories

1. AC Adaptor
2. Battery Pack (Lithium-Ion)
3. Battery Pack (Lithium-Ion)
4. Battery Pack (Lithium-Ion)
5. Car Battery Charger
6. Filter Kit
7. Tele Conversion Lens
8. Wide Conversion Lens
9. Tripod
10. Cassette Adaptor
11. Video Titler
12. IR/Video DC Light (Halogen & Infra-red)
    (It requires the Shoe Adaptor for attaching to the Movie Camera.)
13. Shoe Adaptor (for attaching the IR/Video DC Light)

Some accessories are not available in some countries.

	INITIAL/LOGO	ABBREVIATIONS
A	A.TR	Auto Tracking
	ABSF	Focus Encoder Input
	ACI	Analog Channel Cording IC
	ADCLK	Analogue Digital Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEIRQ	Auto Expose Interrupt Request
	AF	Auto Focus
	AFADE	Audio Fade
	AFCS	Auto Focus Chip Select
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	ALCCNT	Auto Level Control Control
	ALCMAIN	Auto Level Control Drive
	AMUT	Audio Mute
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	ARTV	Artifical Vertical Sync
	ATF	Automatic Track Finding
	ATR	Auto Tracking
	AUX	Auxiliary
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	B-Y KB	B-Y Carrier Balance
	BACK	Back-up
	BATT	Battery
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BF	Burst Flag
	BFND	Burst Flag Pulse
	BFA	Burst Flug for Encoder
	BFO/BFI	Burst Flug Input/Output
	BL	Back Light
	BLC 0, I	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input / Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encoder
	BLKI/O	Blanking Pulse In/Out
	BM	Balance Modulator
	BUF	Buffer
C	C CNT	Colour Control
	C/N	Carrier/Noise
	CAM	Camera
	CAM T	Camera Test
	CAM TL	Capstan Trque Limit
	CAMCLK	Camera Clock
	CAP R/F/S	Capstan Revers(H)/Stop(M)/Forward(L)
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CASDWN	Cassette Down
	CBLK	Composite Blanking Pulse
	CCD	Charge Coupled Devise
	CCW	Counter-Clockwise
	CDS	Correlate Double Sampling Signal
	CDS OUT	CDS Output Signal
	CH	Charge
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CK	Clock
	CL / CLK	Clock
	CMODE	Camera Mode
	CNR	Chrominance Noise Reduction
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	CP	Clamp Pulse
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CRST	Camera Reset
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CW	Clockwise
	CYLVM	Cylinder Motor Current or Power
D	D MODE	Digital Mode Switch Signal
	DAC	Digital Analog Convertor
	DAC	Digital Analogue Converter
	DB0-7	Data 0-7
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DICLK	Digital Clock
	DIS	Digital Image Stabilizer

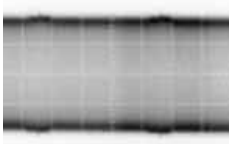
	INITIAL/LOGO	ABBREVIATIONS
D	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DL	Delay Line
	DOBLK	Bit Clock (to D/A Converter)
	DOCTL	Data Output Control
	DODAT	Serial Data (to D/A Converter)
	DRK	Dark
	DS	Double Sampling Pulse
	DS1, 2	Double Sampling Pulse
	DSP	Digital Signal Processor
	DSP	Digital Signal Processor
	DVDD	Digital VDD
	DVSS	Digital Ground
	DZ	Digital Zoom
E	E Snap	Electric Snap Shot
	E2P	EEPROM
	EC	Error Control
	EC	Torque Control
	ECM	Electric Condencer Mic
	EE CS	EEPROM Chip Select
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer
	ENV	Enverope
	EQ	Equalizer
	EVF	Electric View Finder
	EXT DC	External DC (AC Adaptor)
	EZOOM	Electric Zoom
F	F	Far (Focus)
	FB	Feed Back
	FCK	Clock
	FENC	Focus Encoder
	FM	Field Memory
	FM0-7	Field Memory 0 - 7
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable
	FMT	Focus Motor
	FMT1-4	Focus Motor Terminal 1-4
	FNO	F Value
	FR	Capstan Reverse High
G	GCNT	Gain Control
	GSW	Ground for Switching Power
H	H1,2	H. CCD Drive Pulse
	HASW	HEAD AMP SW
	HBRST	High Bright Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HLT	High Bright Signal
	HSS	Horizontal Sinc Signal
	HSS	High Speed Shutter
I	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOU	Analogue R Signal Output Terminal
	IOV	B-Y Analogue Signal Output
	IOV	Analogue B Signal Output Terminal
	IOY	Analogue Y Signal Output Terminal
	IRDET	Infrared Rays Detection
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KND	Digital Gain Up
	KNEE	Knee Corection (γ Control)
L	LCD	Liquid Crystal Display
	LD	Load Pulse
	LDD	Liquid Direct Drive
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LSB	Least Significant Bit
	LVL	LPF Switch for Auto Focus
M	MD	Modulation
	MENB	Focus Motor Enable
	MFF	Manual Focus Far
	MFN	Manual Focus Near
	MIX N.R.D.	Non Rec Data Mix
	MRST	Focus Motor Reset
	MSB	Most Signal Bit
	MVSYNC	Monitor Vertical Sync Signal

	INITIAL/LOGO	ABBREVIATIONS
N	N	Near (Focus)
	N/F	Near/Far Focus
	N/P	NTSC/PAL
	NC	No Connection
	NDE	Non Liner De-Emphasis
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	No Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRDBLK	Non Rec Data Blanking
	NRE	Read Enable Input (Low Active)
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OE	Output Enable
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
	OZ	Optical Zoom
P	PAJ	Picture Control
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	PNP Corrector 1-3
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hole AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	PNP Emitter
	PED	Pedestal
	PEDECNT	Pedestal Control
	PFP	Pilot Frame Position
	PGC	Pulse Generator Comparator
	POR	Power On Reset
	POSCOM	Position Common
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
Q	Q2H	Source Output Select
R	R/B	Read/Busy
	R/L	Direction Select for Data Transmition
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy
	RB	Read Busy
	RCB	R Carrier Balance
	RE	Read Enable
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RGBIV1-2	1V Inverted Signal 1-2
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S PHOT	Supply Photo Transistor
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCR	Search
	"SCR, S.C.R"	Still Cue Review
	SEG.	Segment
	SH/IRIS	Shutter/Iris Control
	SIOC	Serial In/Out Control
	SNS LED	Sensor LED
	SO	Serial Data Output

	INITIAL/LOGO	ABBREVIATIONS
S	SPA	ATF Sampling Pulse
	SPEN	8 Bit Data Enable
	SPST	8 Bit Data Strobe
	SRT	Start
	SSA	Start Sync block Area
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
T	T	Tele (Zoom)
	T PHOT	Take-up Photo Transistor
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL	Take-up Reel
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V1-V4	V.CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREF1R3V	Refference Voltage 1.3V
	VREF3R3V	Refference Voltage 3.3V
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VSS	Vertical Sync Signal
W	W	Wide (Zoom)
	WAD/WAE	Write Address Enable
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WHD	Wide Horizontal Drive Pulse
X	XP	FG Logic Reset
Y	YCE	Cylinder Error Code
	YNCST	Noize Canceller
	YNR	Noise Reduction
Z	Z.ENC	Zoom Encoder
	Z.MIC	Zoom Mic
	ZENC	Zoom Encoder Output
	ZMT(+)/(-)	Zoom Motor (+)/(-)
	ZMTER	Zoom Motor Tele Side
	ZMW	Zoom Motor Wide Side

IC701-12, 14 POWER ON
6.0 Vp-p (5msec./div.)
ZOOM MOTOR DRIVING

IC3001-41 REC
0.2 Vp-p (2msec./div.)
COLOUR BAR



IC3001-36 REC
0.4 Vp-p (5msec./div.)
COLOUR BAR

IC5001-1 PLAY
0.4 Vp-p (2msec./div.)
COLOUR BAR

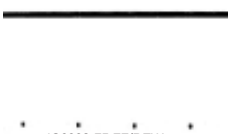
IC5001-47 PLAY
0.2 Vp-p (2msec./div.)
COLOUR BAR

IC5001-8
3.0 Vp-p (20msec./div.)
COLOUR BAR

IC6003-14 FF/REW
2.2 Vp-p (50msec./div.)

IC6003-16 FF/REW
3.0 Vp-p (20msec./div.)

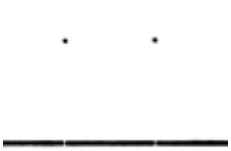
IC6003-66 STOP
2.6 Vp-p (50nsec./div.)



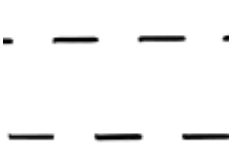
IC6003-75 FF/REW
3.0 Vp-p (10msec./div.)

IC6003-144, IC2001-40 REC/PLAY
5.2 Vp-p (1 sec./div .)

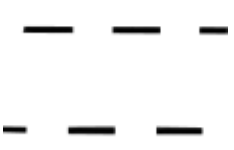
IC6003-145 REC/PLAY
5.4 Vp-p (1 sec./div .)



IC6003-155, IC2001-26 REC/PLAY
3.0 Vp-p (10msec./div.)



IC6003-157, IC2001-25 REC/PLAY
3.0 Vp-p (0.2msec./div.)



IC6003-159, IC2001-27 REC/PLAY
3.0 Vp-p (1msec./div.)

IC6003-174 STOP
5.4 Vp-p (0.5 sec./div .)

IC2201-59, 61, 63 REC/PLAY
2.8 Vp-p (1msec./div.)

IC2201-52, 53, 54 REC/PLAY
2.8 Vp-p (20msec./div.)

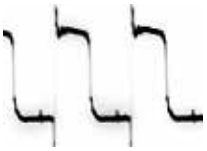
IC2201-21 REC/PLAY
0.6 Vp-p (0.5 sec./div .)

IC302-10 STOP
1.2 Vp-p (20 sec./div .)
GRAY SCALE

IC302-26 STOP
0.6 Vp-p (20 sec./div .)
GRAY SCALE

IC1001-9 STOP
1.0 Vp-p (1 sec./div .)

IC1001-11 STOP
1.4 Vp-p (1 sec./div .)



IC1001-15 STOP
1.3 Vp-p (1 sec./div .)

IC1001-27 STOP
0.6 Vp-p (1 sec./div .)

Q1001-2 STOP
11.8 Vp-p (1 sec./div .)

Q1003-4 STOP
12.0 Vp-p (1 sec./div .)

Q1004-2 STOP
18.0 Vp-p (1 sec./div .)

Q1061-4 STOP
0.2 Vp-p (1 sec./div .)

Q1062-4 STOP
0.2 Vp-p (1 sec./div .)

IC801-5 STOP
1.0 Vp-p (20 sec./div .)
COLOUR BAR

:AUDIO MAIN SIGNAL PATH IN REC MODE

:AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

T4001 VLQ0905

L4005 100u

Q4003 2SB1219 (SWITCHING 4.8V)

CL4004

R4011 22K

C4032 0.22

R4008 39K

C4008 6.3V10

Q4006 2SD2216 (AMP)

R4041 0

R4043 0

C4006 1

R4006 560

R4004 3300

R4007 22K

TO AVS OUT/ Page:37

A OUT	7

TO VIDEO/ Page:32

A OUT	27
CTL OUT	26
MIC IN	28

TO SYSTEM/ Page:34

A MUTE	13
LP (H)	16
A FADE	18
EE (H)	119
D REC (H)	32
PB CTL	120
REC CTL	17
TALLY	14
FADE	121
IR OUT	118
SYS GND	19
REMOTE CTL	15

R4012 4700

C4012 6.3V22

C4011 6.3V10

R4034 22K

R4036 2200

R4040 1K

C4016 4700P

C4004 4700P

Q4002 2SD602-R (BIAS OSC)

R4013 68

C4015 6800P

C4014 0.015

R4005 2.2

C4017 1000P

Q4009 2SD2216 (POWER CONTROL)

QR4001 UN9212 (MUTE)

C4033 4700P

C4009 6800P

R4010 270

C4010 4700P

R4009 22K

R4014 15K

R4016 4700

R4017 4700

Q4005 XP4501 (MUTE)

QR4002 UN9112 (MUTE)

R4042 47K

C4037 1

R4026 180

C4019 560P

R4025 2200

C4036 4V15

C4007 1

IC4001 BA7758FS (AUDIO SIGNAL PROCESSOR)

PBHSW EP/SP MUTE RECEQ OUT RECEQ FADE EE/PB LINE OUT REC/EE DLIN LINE NFB CTLGND CTLIN2 CTL OUT1 CTL(-) CTL(+)

GND PBEQ SW PBEQ IN PBEQ PBEQ SW PBEQ OUT FILTER VCC PBIN BIAS LINE IN ALC CTL RECH CTL OUT2 CTL VCC REC CTLIN

C4027 3300P

C4026 3V/0.33

R4022 3900

C4022 6.3V47

C4024 6.3V47

C4002 1

R4021 5600

C4023 1

R4032 2700

R4033 1500

R4002 1.5M

C4025 6.3V10

C4001 1

C4018 1200P

R4018 33K

R4019 330K

C4041 1000P

R4020 430

C4021 16V3.3

C4020 0.015

R4030 18K

R4031 18K

C4035 1

C4003 6.3V10

C4040 6.3V10

D4001 1SS357TPH3

L4006 100u

QR4004 UN9112 (SWITCHING)

R4015 2200

R4044 68K

L4001 47u

R4003 10K

C4034 1

C4038 22P

R4023 18K

C4013 1

R4035 22K

CL4002

R4001 10

R4038 68

TO AC HEAD FP4001

A GND	9
A H(P)	8
A H(R)	7
A E H GND	6
A E H	5
CTL(-)	4
CTL(+)	3
CE	2
CE GND	1

QR6801 RN2110FTPH3 (TALLY LED DRIVE)

R4024 22K

IC4003 TA75S393F

VCC VEE

R4037 4700

R4039 22K

IC4002 BA6305FV-E2

C4039 0.01

TO MIC/ Page:37

MIC IN	13
ECM GND	14
ECM OUT	15

D6023 MA728

TO MIC UNIT Page:38 FP4002

16	
15	
14	
13	
12	
11	ECM GND
10	ECM OUT
9	SYS GND
8	IR NOREG
7	IR LED OUT
6	IR OUT
5	REMOTE CTL
4	FADE
3	SYS GND
2	TALLY LED
1	SYS REG 5V

TO FP6801

R6802 180

R6801 100

TO POWER/ Page:38

1	ST 4.8V
2	REG 3V
3	REG 4.8V
4	A GND

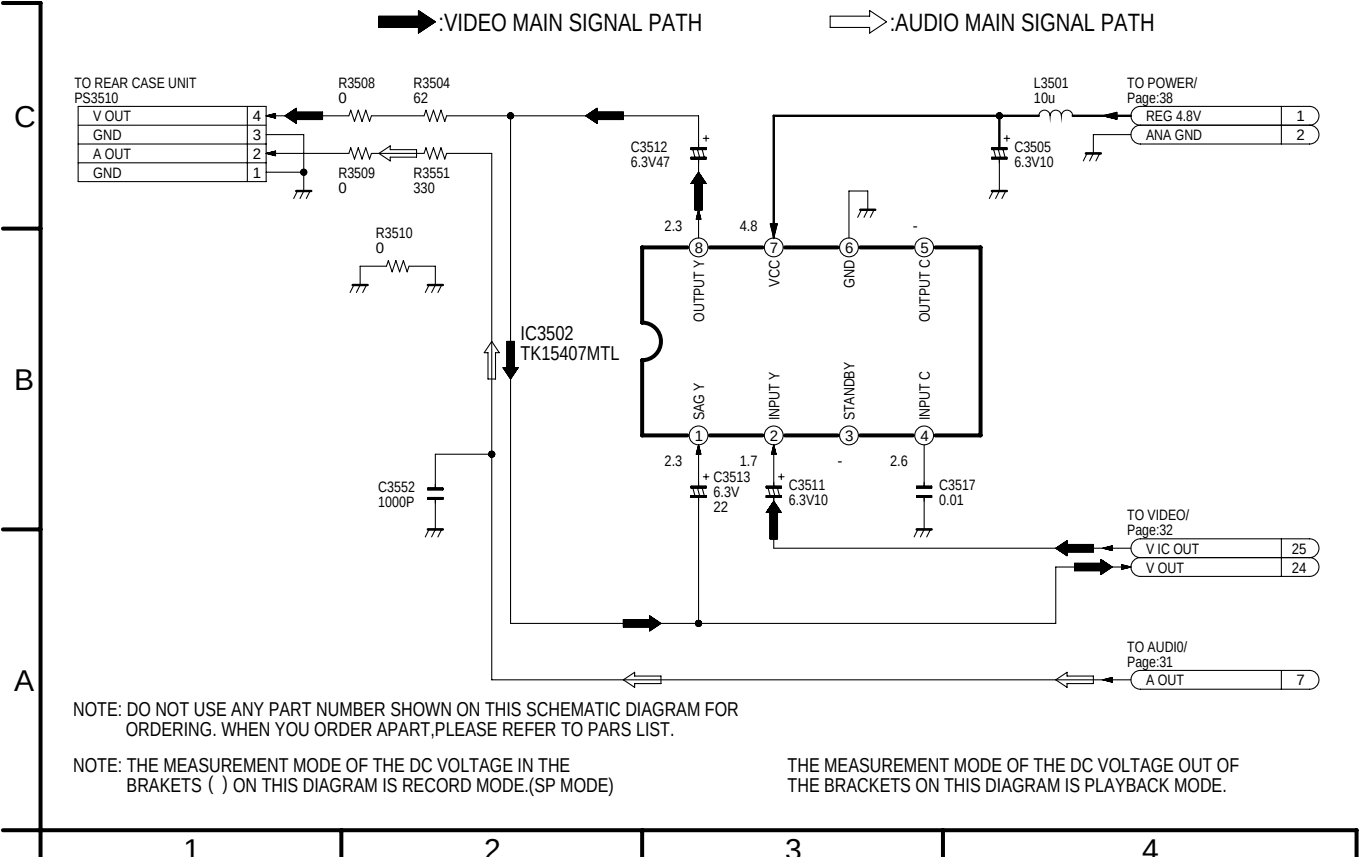
TO LENS DRIVE/ Page:30

5	IR LED OUT
6	IR NOREG

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRAKETS ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER APART,PLEASE REFER TO PARS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRAKETS ( ) ON THIS DIAGRAM IS RECORD MODE.(SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

:VIDEO MAIN SIGNAL PATH

TO CAMERA2/ Page:28

1	SUB
2	CH2
3	CH1
4	V4
5	V3
6	V2
7	V1
8	AD Y IN
9	REG 3V
10	DS2
11	DS1
12	FCK
13	P BLK
14	E2 SBO
15	E2 SBT
16	PWM(B)
17	V REF Y

LB303 VLP0175 L305 10u

C313 0.01 C314 6.3V10

R301 4700 R302 10K Q304 2SA1832FYTH3 (MUTE)

R313 560 R315 330 C326 22P

Q303 HN1B04FUGRR (AMP) R312 1500

TO POWER/ Page:38

19	B LEVEL
20	Y GAIN

TO CAMERA2/ Page:34

21	V REF (H)
22	V REF (L)
23	CG 3.3V
24	H1
25	H2
26	R PULSE

IC302 C8269 (CDS/AGC/AD)

VSS VDD CLP OBP MCK SHR SHD VDD VSS VOS CAMIN REFIN

R201 0 R318 0 R317 0 C319 0.015 C328 0.1 R316 0 C322 0.1

CDS PGA PGA PGA CLAMP VREF/ IREF GEN. OBP DAC KNEE DAC SERIAL REGISTER KNEE BUFF BUFF PGA

DAO0 DAO1 DAO2 DAO3 DAO4 DAO5 DAO6 DAO7 DAO8 DAO9 DAO10 DAO11 EVRDAC 0-11

VCLP NC IBIAS VSS VDD VBOT VTOP VCOM NC PBYIN NC PBCIN

C317 0.1 R309 4700 C318 0.1 C320 6.3V10 C321 6V10 C325 0.1

SDATA SCK CSN RSTN TEST0 TEST1 TEST2 VDD VSS AOUT VOB COUT

C312 0.1 R308 100K RA301 100K(X2) D301 MA111

C311 0.1 C307 10V100

IC315 MN31121SA (CCD DRIVE)

ISUB V2 CH1 V1 VCC V1φ VM13 V2φ VL OSUB

NC V4 CH2 V3 GND VH V3φ V4φ VM24 VHH

LEVEL CONVERTER 3 STATE DRIVER

R253 0

Q301 2SC4627 (AMP) C305 12P C310 0.1 R303 2200 R304 270

R305 0 R306 0 R307 100 C306 0.01

TO CCD/ PP301 Page:38

1	OUT
2	15V
3	SUB
4	H1
5	H2
6	R
7	PW
8	φV4
9	φV3
10	φV2
11	V1
12	PT

TO PS291

LB301 VLP0153 LB302 VLP0153

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CAM 15V	27
CAM -8V	28

TO LENS DRIVE/ Page:30

HALL BIAS	29
HALL GAIN	30

TO CAMERA2/ Page:28

TVOL CLV	31

TO VIDEO/ Page:32

WVOL CRE	17

TO SYSTEM/ Page:34

CSN	78

TO VIDEO/ Page:32

Y CTL	16

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING.WHEN YOU ORDER A PART,PLEASE REFER TO PARTS LIST.
NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.